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Attorneys for Plaintiff  
ROVI GUIDES, INC.

**UNITED STATES DISTRICT COURT  
CENTRAL DISTRICT OF CALIFORNIA**

ROVI GUIDES, INC.,	)	Case No. 2:19-cv-0275-AG (FFMx)
Plaintiff,	)	
v.	)	Judge: Andrew J. Guilford
COMCAST CORPORATION; COMCAST	)	
CABLE COMMUNICATIONS, LLC;	)	<b>AMENDED COMPLAINT FOR</b>
COMCAST CABLE COMMUNICATIONS	)	<b>PATENT INFRINGEMENT</b>
MANAGEMENT, LLC; COMCAST	)	
BUSINESS COMMUNICATIONS, LLC;	)	<b>DEMAND FOR JURY TRIAL</b>
COMCAST HOLDINGS CORPORATION;	)	
COMCAST SHARED SERVICES, LLC;	)	
COMCAST OF SANTA MARIA, LLC; and	)	
COMCAST OF LOMPOC, LLC,	)	
Defendants.	)	

Plaintiff Rovi Guides, Inc. brings this Complaint for patent infringement against Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; Comcast Shared Services, LLC; Comcast of Santa Maria, LLC; Comcast of Lompoc, LLC (all Comcast entities, collectively, Comcast or Defendants) for infringement of U.S. Patent Nos. 9,055,319 (the '319 Patent); 8,448,215 (the '215 Patent); 8,973,069 (the '069 Patent); 7,873,978 (the '978 Patent); 9,232,254 (the '254 Patent); 8,272,019 (the '019 Patent); 7,735,107 (the '107 Patent); and 9,118,948 (the '948 Patent) (collectively, Asserted Patents). Plaintiff, on personal knowledge as to its own acts, and upon information and belief as to all others based on investigation, alleges as follows:

### **SUMMARY OF THE ACTION**

1. For over a decade, Comcast has built its interactive cable video business on the back of Rovi's patented technology. Like every other major US Pay-TV provider in the United States, Comcast licensed Rovi's patented technology for a fixed term. But unlike every one of its Pay-TV competitors, Comcast refuses to renew its patent license on acceptable terms. Although Comcast's patent license expired, it continues to make, use, sell, offer for sale, import, lease, offer to lease, and distribute products that not only practice Rovi's patented innovations, but also compete with Rovi's own products. This action seeks relief for some of Comcast's unauthorized, infringing, and competitive conduct.

2. Fourteen years ago, when Rovi's US patent portfolio was less than half the size it is today, Comcast paid Rovi over \$250 million for a fixed-term license to Rovi's patent portfolio (License). The License also included important, non-monetary terms.

1           3. Under the License, Comcast could use Rovi's patents in connection with  
2 Comcast's and its affiliates' Pay-TV systems. But the License expired on March 31,  
3 2016, and since then, Comcast has not only failed to remove its infringing products  
4 and services from the market, it continues to provide and actively promote those  
5 infringing products and services to millions of its subscribers.

6           4. As part of the parties' negotiations to renew Comcast's License, Rovi  
7 provided Comcast notice of infringement of many of the Asserted Patents. Rovi also  
8 explained that without renewing its License, Comcast would no longer have  
9 permission to use Rovi's patented innovations. Instead of taking a license, Comcast  
10 decided to willfully infringe those Asserted Patents.

11           5. After the License expired, Rovi brought suit against Comcast in district  
12 court and in enforcement actions at the International Trade Commission (ITC) for  
13 patent infringement, asserting a small number of patents in its portfolio not asserted  
14 here.

15           6. In November 2017, the ITC issued orders in the first ITC Investigation in  
16 favor of Rovi barring Comcast from importing and distributing Comcast's infringing  
17 set-top boxes (STBs) in the United States. *See generally In re Certain Digital Video*  
18 *Receivers & Hardware & Software Components Thereof*, Inv. No. 337-TA-1001,  
19 Comm'n Op. (Dec. 6, 2017) (Final Public Version). And in response, Comcast  
20 disabled valuable features that infringed the patents asserted in that ITC action,  
21 drawing complaints from Comcast's subscribers.

22           7. And yet still, notwithstanding the ITC's orders and pending litigation,  
23 Comcast continues to refuse to renew its license to Rovi's technology. Comcast's  
24 decision to continue to willfully infringe stands in stark contrast to its prior  
25 recognition of the need for a license from Rovi.

26           8. Indeed, Comcast is the lone holdout. Virtually the entire US Pay-TV  
27 industry is licensed to Rovi's portfolio of IPG patents. And in 2015 and 2016, every  
28

1 major Pay-TV provider in the United States—*except Comcast*—renewed its license on  
2 economic terms that are generally consistent with those that Rovi has offered to  
3 Comcast, including AT&T, Charter, DISH, and Verizon. This is a clear testament to  
4 the value the industry places on Rovi’s patent portfolio. So, while every one of its  
5 competitors pays a fair price for Rovi’s innovative technology, Comcast alone uses it  
6 for free. Rovi is forced, then, to bring this additional infringement suit asserting  
7 additional patents in order to enforce its patent rights.

8 9. Rovi’s patent portfolio spans a broad range of interactive program guide  
9 and related video technologies, and Rovi presented many aspects of its portfolio to  
10 Comcast. During Rovi’s negotiations with Comcast about renewing Comcast’s  
11 license, Rovi provided exemplary patents from a variety of areas of Rovi’s portfolio,  
12 including Guidance, Search & Recommendations, local DVR (digital video recorder),  
13 remote DVR, VOD (video-on-demand), Second Screen, and Interactive TV. In order  
14 to streamline this action, the Asserted Patents in this Complaint relate to just one  
15 portion of Rovi’s portfolio: advanced DVR functionalities such as cloud or network  
16 recording and whole-home or multi-room DVR arrangements that were developed by  
17 a Rovi company, United Video.

18 10. The Asserted Patents cover fundamental DVR technologies at the core of  
19 the Comcast X1 system. Rovi’s patented technology is therefore immensely valuable  
20 to Comcast and its customers. Nevertheless, Comcast has been using the technology  
21 claimed in these patents without a license—for free—since April 2016. While some  
22 of the Asserted Patents will expire before or shortly after trial, Rovi is nonetheless  
23 entitled to recover the value that Comcast has refused to pay for the fundamental  
24 DVR technologies covered by the Asserted Patents since Comcast’s license expired.  
25 Rovi brings this action to seek its due compensation, and to deter Comcast’s  
26 continued disregard for Rovi’s intellectual property.

## **THE PARTIES**

### **I. ROVI: A PIONEER IN MEDIA TECHNOLOGY**

11. Plaintiff Rovi Guides, Inc. is a Delaware corporation, with a principal place of business at 2160 Gold Street, San Jose, California, 95002. Rovi Guides is a wholly-owned subsidiary of Rovi Corporation and is the owner of the Asserted Patents.

12. Rovi is a global leader in digital entertainment technology solutions. Rovi's market-leading digital entertainment solutions enable the proliferation of access to media on electronic devices; these solutions include products and services related to Interactive Program Guides (IPGs) and other content delivery solutions, content discovery solutions, personalized search and recommendation, advertising and programming promotion optimization, and other data and analytics solutions to monetize interactions across multiple entertainment platforms. Rovi's solutions are used by companies worldwide in applications such as cable, satellite, and internet protocol television (IPTV) receivers, including digital television set-top boxes (STBs) and DVRs; PCs, mobile, and tablet devices; and other means by which consumers connect to entertainment.

13. Rovi companies are and have been pioneers in media technology, including the technology facilitating consumer access to and discovery of television and other audiovisual media. Since introducing one of the first on-screen electronic program guides in 1981, Rovi has continued to innovate, developing products, services, and other solutions that connect consumers with their entertainment.

14. Thanks largely to those innovations, Rovi has a portfolio of over 1,200 issued U.S. patents, including the Asserted Patents, and over 500 pending U.S. patent applications, more than 400 of which were filed after Comcast's license expired. Rovi's patent portfolio has grown through strategic acquisitions of groundbreaking companies, such as Veveo, and of patent portfolios from world-class innovators, such

1 as Microsoft. Rovi's patented inventions are used daily by consumers of media  
2 content, and are "must-haves" for television, other media service providers, and the  
3 consumer electronics industry that supports them.

4 15. In recognition of the importance and value of Rovi's patented  
5 technologies and Rovi's role as an innovator, every major U.S. Pay-TV provider,  
6 including Comcast until its license agreement expired in 2016, has taken a license to  
7 a portfolio of Rovi's patents.

8 16. In further recognition of the importance of Rovi's innovations, hundreds  
9 of small to mid-size cable operators in the United States use Rovi's i-Guide and  
10 Passport IPG solutions today to provide television discovery and navigation features  
11 to millions of their subscribers.

12 17. Today, Rovi engineers continue to innovate to bring Rovi to the forefront  
13 of the next generation of IPG technology. In April 2018, Rovi released its Next-Gen  
14 Platform, an IPG solution based on internet-protocol (IP) that allows operators and  
15 consumers access to the most advanced television-viewing and navigation features.

## 16 **II. DEFENDANTS**

17 18. Upon information and belief, Comcast Corporation is a Pennsylvania  
18 corporation, with a principal place of business at One Comcast Center, 1701 John F.  
19 Kennedy Blvd., Philadelphia, Pennsylvania, 19103. Through its wholly-owned  
20 subsidiaries, Comcast Corporation provides "Comcast" branded services, including  
21 Xfinity digital video, audio, and other content services to customers. Subscribers to  
22 Comcast's Xfinity television services receive a receiver, such as a set-top box. Upon  
23 information and belief, Comcast Corporation develops the infringing Xfinity services  
24 and equipment and provides the infringing receivers to customers.

25 19. Upon information and belief, Comcast Cable Communications, LLC is a  
26 Delaware limited liability company, with a principal place of business at One  
27

1 Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania, 19103.  
2 Upon information and belief, Comcast Cable Communications, LLC is a subsidiary  
3 of Comcast Corporation. Upon information and belief, Comcast Cable  
4 Communications, LLC, jointly with the other Defendants, develops the infringing  
5 Xfinity services and equipment and provides infringing receivers to customers.

6 20. Upon information and belief, Comcast Cable Communications  
7 Management, LLC is a Delaware limited liability company, with a principal place of  
8 business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia,  
9 Pennsylvania, 19103. Upon information and belief, Comcast Cable Communications  
10 Management, LLC is a subsidiary of Comcast Corporation. Upon information and  
11 belief, Comcast Cable Communications Management, LLC, jointly with the other  
12 Defendants, develops the infringing Xfinity services and equipment and provides  
13 infringing receivers to customers.

14 21. Upon information and belief, Comcast Business Communications, LLC  
15 is a Pennsylvania limited liability company, with a principal place of business at One  
16 Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania, 19103.  
17 Upon information and belief, Comcast Business Communications, LLC is a  
18 subsidiary of Comcast Corporation. Upon information and belief, Comcast Business  
19 Communications, LLC, jointly with the other Defendants, develops the infringing  
20 Xfinity services and equipment and provides infringing receivers to customers.

21 22. Upon information and belief, Comcast Holdings Corporation is a  
22 Pennsylvania corporation, with a principal place of business at One Comcast Center,  
23 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania, 19103. Upon information  
24 and belief, Comcast Holdings Corporation is a subsidiary of Comcast Corporation.  
25 Upon information and belief, Comcast Holdings Corporation, jointly with the other  
26 Defendants, develops the infringing Xfinity services and equipment and provides  
27 infringing receivers to customers.



23. Upon information and belief, Comcast Shared Services, LLC is a Delaware corporation, with a principal place of business at 330 N. Wabash Ave. 22, Chicago, IL, 60611-3586. Upon information and belief, Comcast Shared Services, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast Shared Services, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

24. Upon information and belief, Comcast of Santa Maria, LLC is a Delaware corporation, with a principal place of business at 685 East Betteravia Rd., Santa Maria, CA 93454. Upon information and belief, Comcast of Santa Maria, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast of Santa Maria, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

25. Upon information and belief, Comcast of Lompoc, LLC is a Delaware corporation, with a principal place of business at 1145 North H Street, Suite B, Lompoc, CA 93436. Upon information and belief, Comcast of Lompoc, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast of Lompoc, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

### **JURISDICTION AND VENUE**

26. This is an action arising under the patent laws of the United States, 35 U.S.C. §§ 1, *et seq.* Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 (federal question) and 1338(a) (action arising under an Act of Congress relating to patents). Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b).

27. More specifically, this action for patent infringement involves Comcast's manufacture, use, sale and/or lease, offer for sale and/or lease, and/or importation



1 into the United States of its infringing IPG system, including STBs (and their  
 2 peripheral devices, such as remote control units), having hardware and software  
 3 components, including, in particular, IPG software, alone or in conjunction with  
 4 Comcast servers and/or mobile applications (the Accused Products) that are used in  
 5 and with Comcast's Xfinity cable services.

6 28. The Accused Products include Comcast digital video receivers and  
 7 related hardware and software, including at least the associated IPG software. Such  
 8 Accused Products include X1 DVR and non-DVR set-top boxes,<sup>1</sup> Xfinity Stream and  
 9 TV Remote mobile applications,<sup>2</sup> the Xfinity Stream Portal,<sup>3</sup> and the servers that  
 10 operate in conjunction with the X1 receivers and Xfinity Stream App and Portal to  
 11 create the Comcast Xfinity X1 System.

12 29. Upon information and belief, Comcast operates at least two Xfinity stores  
 13 physically located in the Central District of California. Upon information and belief,  
 14 Comcast conducts its regular, established business at these locations. These Xfinity  
 15 stores provide infringing products to customers in this District. Comcast lists these  
 16 Xfinity stores on its website and identifies them as places where customers can obtain  
 17 infringing products.<sup>4</sup> Upon information and belief, Comcast owns and/or leases the  
 18 premises where these Xfinity stores are located. Upon information and belief, these  
 19  
 20

21 <sup>1</sup> See *X1 TV Box Comparison – DVR vs. Non-DVR*, XFINITY,  
 22 <https://www.xfinity.com/support/articles/x1-hub-vs-companion-box> (last visited Oct. 31, 2018).

23 <sup>2</sup> See *Set up the XFINITY TV Remote App*, XFINITY, [https://www.xfinity.com/support/xfinity-](https://www.xfinity.com/support/xfinity-apps/setting-up-the-cable-tv-app/)  
 24 [apps/setting-up-the-cable-tv-app/](https://www.xfinity.com/support/xfinity-apps/setting-up-the-cable-tv-app/) (last visited Oct. 31, 2018); *Get Access to Xfinity Stream*, XFINITY,  
 25 <https://www.xfinity.com/get-stream> (last visited Oct. 31, 2018).

26 <sup>3</sup> See *View Programs from Your Xfinity Stream Portal*, XFINITY,  
 27 <https://www.xfinity.com/support/articles/xfinity-tv-website-on-screen-guide> (last visited Oct. 31,  
 28 2018).

<sup>4</sup> See, e.g., *685 East Betteravia Rd*, COMCAST, [https://www.xfinity.com/local/ca/santa-](https://www.xfinity.com/local/ca/santa-maria/685-east-betteravia-rd.html)  
[maria/685-east-betteravia-rd.html](https://www.xfinity.com/local/ca/santa-maria/685-east-betteravia-rd.html) (last visited Dec. 17, 2018).

1 Xfinity stores are staffed by persons directly employed by Comcast, many of whom  
2 live in this District.

3 30. This Court has general and/or specific personal jurisdiction over Comcast  
4 Corporation, and venue is proper, in part because Comcast Corporation, directly  
5 and/or in combination with its subsidiaries and/or through its agents, does continuous  
6 and systematic business in this district, including by providing infringing products  
7 and services to residents of the Central District of California, by providing infringing  
8 products and services that it knew would be used within this district, and/or by  
9 participating in the solicitation of business from residents of this district.

10 31. In addition, upon information and belief, Comcast Corporation, directly  
11 or through its subsidiaries, places infringing products in the stream of commerce,  
12 which is directed at this district, with the knowledge and/or understanding that such  
13 products will be sold, leased, or otherwise provided to customers within this district.  
14 In addition, upon information and belief, Comcast Corporation, directly or through its  
15 subsidiaries, employs individuals within the Central District of California, including  
16 employees who provide infringing products and services to customers here, and  
17 maintains offices and facilities here. Comcast Corporation, directly or through its  
18 subsidiaries, operates highly commercial websites through which regular sales and/or  
19 leases of products and/or sales of services are made to customers in this district,  
20 including products and services that, upon information and belief, infringe the  
21 Asserted Patents.

22 32. This Court has general and/or specific personal jurisdiction over Comcast  
23 Cable Communications, LLC, and venue is proper, in part because Comcast Cable  
24 Communications, LLC, directly and/or in combination with other Comcast entities  
25 and/or through its agents, does continuous and systematic business in this district  
26 including by providing infringing products and services to residents of the Central  
27 District of California, by providing infringing products and services that it knew  
28

1 would be used within this district, and/or by participating in the solicitation of  
2 business from residents of this district. In addition, upon information and belief,  
3 Comcast Cable Communications, LLC, directly or through its subsidiaries, places  
4 infringing products in the stream of commerce, which is directed at this district, with  
5 the knowledge and/or understanding that such products will be sold, leased, or  
6 otherwise provided to customers within this district. In addition, upon information  
7 and belief, Comcast Cable Communications, LLC, directly or through its  
8 subsidiaries, employs individuals within the Central District of California, including  
9 employees who provide infringing products and services to customers here, and  
10 maintains offices and facilities here. Comcast Cable Communications, LLC, directly  
11 or through its subsidiaries, operates highly commercial websites through which  
12 regular sales and/or leases of products and/or sales of services are made to customers  
13 in this district, including products and services that, upon information and belief,  
14 infringe the Asserted Patents.

15 33. This Court has general and/or specific personal jurisdiction over Comcast  
16 Cable Communications Management, LLC, and venue is proper, in part because  
17 Comcast Cable Communications Management, LLC, directly and/or in combination  
18 with other Comcast entities and/or through its agents, does continuous and systematic  
19 business in this district including by providing infringing products and services to  
20 residents of the Central District of California, by providing infringing products and  
21 services that it knew would be used in this district, and/or by participating in the  
22 solicitation of business from residents of this district. In addition, upon information  
23 and belief, Comcast Cable Communications Management, LLC, directly or through  
24 its subsidiaries, places infringing products in the stream of commerce, which is  
25 directed at this district, with the knowledge and/or understanding that such products  
26 will be sold, leased, or otherwise provided to customers within this district. In  
27 addition, upon information and belief, Comcast Cable Communications Management,  
28

1 LLC, directly or through its subsidiaries, employs individuals within the Central  
2 District of California, including employees who provide infringing products and  
3 services to customers here, and maintains offices and facilities here. Comcast Cable  
4 Communications Management, LLC, directly or through its subsidiaries, operates  
5 highly commercial websites through which regular sales and/or leases of products  
6 and/or sales of services are made to customers in this district, including products and  
7 services that, upon information and belief, infringe the Asserted Patents.

8 34. This Court has general and/or specific personal jurisdiction over Comcast  
9 of Santa Maria, LLC and venue is proper, in part, because Comcast of Santa Maria,  
10 LLC, directly and/or in combination with other Comcast entities and/or through its  
11 agents, does continuous and systematic business in this district including by  
12 providing infringing products and services to residents of the Central District of  
13 California, by providing infringing products and services that it knew would be used  
14 within this district, and/or by participating in the solicitation of business from  
15 residents of this district. In addition, upon information and belief, Comcast of Santa  
16 Maria, LLC, directly or through its subsidiaries, places infringing products within the  
17 stream of commerce, which is directed at this district, with the knowledge and/or  
18 understanding that such products will be sold, leased, or otherwise provided to  
19 customers within this district. In addition, upon information and belief, Comcast of  
20 Santa Maria, LLC, directly or through its subsidiaries, has a regular and established  
21 business within the Central District of California, at least at the Comcast store and  
22 service center at 685 East Betteravia Rd., Santa Maria, CA 93454. In addition, upon  
23 information and belief, Comcast of Santa Maria, LLC, directly or through its  
24 subsidiaries, employs individuals within the Central District of California, including  
25 employees who provide infringing products and services to customers here, and  
26 maintains offices and facilities here. Comcast of Santa Maria, LLC, directly or  
27 through its subsidiaries, operates highly commercial websites through which regular  
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1 sales and/or leases of products and/or sales of services are made to customers in this  
2 district, including products and services that, upon information and belief, infringe  
3 the Asserted Patents.

4 35. This Court has general and/or specific personal jurisdiction over Comcast  
5 of Lompoc, LLC, and venue is proper, in part because Comcast of Lompoc, LLC,  
6 directly and/or in combination with other Comcast entities and/or through its agents,  
7 does continuous and systematic business in this district including by providing  
8 infringing products and services to residents of the Central District of California, by  
9 providing infringing products and services that it knew would be used in this district,  
10 and/or by participating in the solicitation of business from residents of this district. In  
11 addition, upon information and belief, Comcast of Lompoc, LLC, directly or through  
12 its subsidiaries, places infringing products in the stream of commerce, which is  
13 directed at this district, with the knowledge and/or understanding that such products  
14 will be sold, leased, or otherwise provided to customers in this district. In addition,  
15 upon information and belief, Comcast of Lompoc, LLC, directly or through its  
16 subsidiaries, has a regular and established business within the Central District of  
17 California, at least at the Comcast store and service center at 1145 North H Street,  
18 Suite B, Lompoc, CA 93436. In addition, upon information and belief, Comcast of  
19 Lompoc, LLC, directly or through its subsidiaries, employs individuals in the Central  
20 District of California, including employees who provide infringing products and  
21 services to customers here, and maintains offices and facilities here. Comcast of  
22 Lompoc, LLC, directly or through its subsidiaries, operates highly commercial  
23 websites through which regular sales and/or leases of products and/or sales of  
24 services are made to customers in this district, including products and services that,  
25 upon information and belief, infringe the Asserted Patents.

26 36. This Court has general and/or specific personal jurisdiction over the  
27 remaining Defendants, and venue is proper, in part because said Defendants, directly  
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1 and/or in combination with Comcast Corporation and/or other Comcast Corporation  
 2 subsidiaries, and/or through their agents, do continuous and systematic business in  
 3 this district including by providing infringing products and services to residents of the  
 4 Central District of California, by providing infringing products and services that it  
 5 knew would be used within this district, and/or by participating in the solicitation of  
 6 business from residents of this district.

7 37. Venue is appropriate in this Court because the Plaintiff maintains its  
 8 business in this District. One of Rovi's primary offices is situated at 2233 N. Ontario  
 9 St., Burbank, CA 91504 and employs approximately 85 employees, including  
 10 witnesses expected to testify in this action.

## 11 **FACTUAL BACKGROUND**

### 12 **I. ROVI'S HISTORY OF INNOVATION AND COMMERCIAL SUCCESS**

13  
 14 38. Rovi has invested in developing the substantial majority of the pioneering  
 15 advances in IPG technology and related functionality for subscription-based  
 16 television (aka Pay-TV) broadcasting.

17 39. Since the launch of TV Guide Magazine in 1953, the Rovi family of  
 18 companies (which has included, through strategic mergers, joint ventures, and  
 19 acquisitions, United Video, TV Guide Onscreen, StarSight Telecast, Prevue, TV  
 20 Guide, Video Guide, Gemstar, Aptiv Digital, Macrovision, Veveo, and FanTV) has  
 21 been a pioneer and recognized leader in media technology, including the technology  
 22 used to facilitate consumer access to television and other audiovisual media. Today,  
 23 Rovi's market-leading digital entertainment solutions enable the proliferation of  
 24 access to media on electronic devices; these solutions include products and services  
 25 related to IPGs and other content discovery solutions, personalized search and  
 26 recommendation, advertising and programming promotion optimization, and other  
 27 data and analytics solutions to monetize interactions across multiple entertainment  
 28



1 platforms. Rovi's solutions are used by companies worldwide in applications such as  
2 cable, satellite, and internet protocol television (IPTV) receivers (including digital  
3 television STBs and digital video recorders (DVRs)); PCs, mobile, and tablet  
4 devices; and other means by which consumers connect to entertainment.

5 40. United Video was founded in Tulsa, OK, in 1965. United Video was a  
6 visionary in broadcasting and entertainment throughout its history. United Video  
7 offered the first electronic program guide in North America in 1981, almost 30 years  
8 after the launch of TV Guide Magazine. This electronic program guide automatically  
9 scrolled through program listings and did not provide any interactive program  
10 features. Interactive program guides, which allow viewers to interact with program  
11 listings, only became available later. Thus, before the 1990s and before United  
12 Video's innovations during that time period, television viewers could only access  
13 program listings with printed guides or automatically scrolling electronic guides.

14 41. In the 1990s, United Video's innovations established itself as a pioneer in  
15 digital broadcasting and interactive program guide technology, such as advanced  
16 DVR features. United Video's forward-looking advanced DVR technologies—  
17 including functionalities such as remote server recording and multi-client IPG  
18 systems that relate to the Asserted Patents—remain important features for the cable  
19 industry even today.

20 42. In the late 1980s, another Rovi company invented the VCR Plus®, which  
21 significantly simplified programming of videocassette recorders, enabling television  
22 subscribers to more easily record the content they desired. VCR Plus® was a  
23 resounding success and helped establish the Rovi family of companies as the  
24 frontrunner in the program guide industry by broadly licensing its VCR Plus®  
25 product and related technologies.

26 43. In the mid-1990's, another Rovi company launched the first IPG services  
27 designed for use in Pay-TV television receivers. These early IPGs were full-screen  
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1 grid guides that displayed television program listings by time and channel in a two-  
2 dimensional grid. Using a remote control, a user could interact with the guides to see,  
3 for example, what was on television at a later time or on a different channel, instead  
4 of depending on the automated scrolling of a traditional on-screen guide

5 44. Rovi's IPG technologies today allow for multi-screen entertainment  
6 across a variety of user devices (e.g., seamless access to the same media from  
7 multiple devices and device types, like a television and mobile device), and provide  
8 customizable listings for televisions, receivers, game consoles, and mobile devices,  
9 thereby allowing consumers to find, discover, and enjoy the content they want, when  
10 they want it, and where they want to access it. These and other innovations help users  
11 navigate an increasingly overwhelming amount of content to discover and access  
12 entertainment they actually want to watch on virtually any platform or device.

13 45. To maintain Rovi's leadership position in this industry, Rovi has invested  
14 and continues to invest significant resources in the design, development and licensing  
15 of its IPGs and related technologies used by television service providers (as well as  
16 others in the digital entertainment industry). For example, from 2014 to 2017, Rovi  
17 invested over \$300 million in research and development. Furthermore, Rovi has over  
18 700 U.S.-based, full-time employees supporting the development of new products  
19 and platforms.

20 46. Rovi has incorporated its technological innovations resulting from its  
21 significant investment in research and development into its commercial products. For  
22 example, Rovi's i-Guide and Passport Guide are IPGs that provide comprehensive  
23 listings, intuitive search capabilities, advanced DVR and Video-on-Demand  
24 functionality, and HD support. Hundreds of small to mid-size cable operators, serving  
25 millions of subscribers in the United States, use Rovi's i-Guide and Passport Guide  
26 IPG solutions today.

47. In addition, Rovi invests heavily in next-generation IPTV solutions. These investments have led to groundbreaking products like the Next-Gen Platform IPG solution, which was announced to the public in January 2018 and released to the public in April 2018. The Next-Gen Platform IPG solution serves an expanding base of retail TiVo Bolt/VOX hardware users and cable operator-customers with industry-leading IPTV features.

48. The value of Rovi's innovative solutions has been recognized by numerous leading Pay-TV service providers, which license these technologies and solutions from Rovi. Today, almost 150 million households worldwide access Pay-TV entertainment through Rovi's technology.

49. In addition, Rovi's innovative IPG related technologies have been recognized through numerous industry awards and accolades. For example, in 2012 Rovi was awarded a Technology and Engineering Emmy® Award for its "Pioneering On-Screen Interactive Program Guides" that assist "viewer[s] in rapidly locating their desired program." These Emmy® awards are designed to recognize "developments . . . involved in engineering technologies which either represent so extensive an improvement on existing methods or are so innovative in nature that they materially have affected the transmission, recording, or reception of television."<sup>5</sup>

50. Rovi's history of innovation is also reflected in the extensive patent coverage awarded to Rovi for its inventions. This portfolio, which includes more than 4,500 issued or pending patents worldwide, is a direct result of Rovi's substantial and ongoing investment in research and development. The Asserted Patents are reflective of this history of innovation, embodying a number of firsts in the development of IPG and advanced DVR related technologies.

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<sup>5</sup> *Technology & Engineering*, THE NATIONAL ACADEMY OF TELEVISION ARTS & SCIENCES, <http://emmyonline.com/tech> (last visited Dec. 17, 2018).

1           51. The strength of Rovi’s patent portfolio has been recognized by the  
2 entertainment industry. Every major U.S. Pay-TV provider, including AT&T (which  
3 recently acquired DirecTV), Charter, Dish, and Verizon among others, has  
4 acknowledged the value of Rovi’s innovations by licensing Rovi’s patents covering  
5 these innovations—and renewing those licenses in the last few years. Comcast itself  
6 once licensed Rovi’s portfolio for over \$250 million for a fixed term (March 2004 –  
7 March 2016). Many leading video content providers, including both traditional media  
8 (cable, satellite, IPTV) and new media (online, mobile), as well as manufacturers and  
9 distributors of receivers and other consumer electronic devices, have also licensed  
10 Rovi’s patent portfolio. Yet, despite this widespread recognition of the value and  
11 importance of Rovi’s patent portfolio, Comcast decided to free ride, refusing to  
12 renew its license and compensate Rovi.

13           52. Rovi’s long-term financial success depends, in part, on its ability to  
14 establish, maintain, and protect its proprietary technology through patents. Comcast’s  
15 infringement presents significant and ongoing harm to Rovi’s business.

## 16       **II. COMCAST HAS LONG BENEFITED FROM ITS USE OF ROVI’S** 17       **PATENTED TECHNOLOGIES**

18           53. Before Comcast first licensed Rovi’s patents, it measured business  
19 success with reference to how many subscribers it had. Comcast did not historically  
20 measure its business success by the quality of the services it provided to its  
21 customers. Comcast touted itself in its 2002 10-K as being the “largest cable operator  
22 in the United States.”

23           54. Nonetheless, beginning in or around 2004, Comcast began attributing  
24 revenue growth to its “advanced services” including Video-on-Demand (VOD) and  
25 digital-video-recording (DVR). Comcast recognized that its future business success  
26 depended on product differentiation from other cable operators and satellite  
27  
28

1 providers—product differentiation provided by offering advanced services to its  
2 customers.

3 55. In 2004, to secure the growth in its “advanced services,” Comcast entered  
4 into a license agreement with Gemstar (a forerunner to Rovi) (2004 Agreement)  
5 which Comcast described in SEC filings as an effort “to acquire and develop  
6 technology that will drive product differentiation and new applications and extend  
7 our nationwide fiber-optic network”<sup>6</sup> and enhance Comcast’s IPG platform to  
8 improve Comcast’s ability to challenge its competitors. Importantly, the 2004  
9 Agreement was not a sale of technology from Gemstar to Comcast by which Comcast  
10 “acquired” the technology from Gemstar; it was a license for a fixed term during  
11 which Comcast had permission from Gemstar to use that technology for specific  
12 purposes, but only until the license expired. The 2004 Agreement included a Joint  
13 Venture with Gemstar called GuideWorks, under which Gemstar would help  
14 Comcast develop a next generation IPG platform, as well as a license to Gemstar’s  
15 guidance patent portfolio.

16 56. Comcast’s use of Rovi’s (then Gemstar’s) technology to develop and  
17 enhance IPGs to be offered by Comcast is evidenced, among other ways, by  
18 Comcast’s description of the 2004 Agreement in the Comcast 2006 10-K SEC filing.  
19 Comcast stated, “This [2004 Agreement] allows us to utilize Gemstar’s intellectual  
20 property and technology and the TV Guide brand and content on our interactive  
21 program guides. . . . In addition, we and Gemstar formed an entity to develop and  
22 enhance interactive programming guides.”<sup>7</sup>

23  
24  
25 <sup>6</sup> See Comcast Annual Report 2004 at 18, available at  
26 [http://www.annualreports.com/HostedData/AnnualReportArchive/c/NASDAQ\\_CMCSA\\_2004.pdf](http://www.annualreports.com/HostedData/AnnualReportArchive/c/NASDAQ_CMCSA_2004.pdf).

27 <sup>7</sup> *Id.* at 48.

1           57. In order to further secure improved products and services, in 2004,  
 2 “Comcast sign[ed] strategic agreements with Gemstar-TV Guide and Microsoft to  
 3 develop enhancements to the user interface and the functionality of its service  
 4 offerings.”<sup>8</sup>

5           58. Comcast’s 10-K SEC filings from 2004 to date consistently evidence  
 6 Comcast’s recognition of the importance of the technology needed to provide  
 7 advanced services in connection with its digital cable services, including advanced  
 8 VOD and DVR features. In fact, in its 2004 10-K, Comcast noted that its “subscriber  
 9 growth is attributable to new and improved products and advanced services in our  
 10 digital cable and high-speed Internet services.”<sup>9</sup> Each filing thereafter provides  
 11 additional evidence that Comcast recognized the importance of its advanced services.  
 12 Increased competition from telecommunications providers, ISPs, and satellite  
 13 companies in the provision and delivery of new and advanced services was, and since  
 14 2004 has been, one of Comcast’s greatest competitive concerns.

15           59. Rovi is informed and believes that the technology Rovi made available to  
 16 Comcast during the term of the 2004 Agreement was foundational to Comcast’s  
 17 ability from 2004 to the present to offer new and advanced services, to grow its  
 18 business, and to develop its own IPG and advanced service platforms, and throughout  
 19 that period Comcast personnel were aware of these facts.

20           60. In 2010, Comcast and Rovi terminated their joint venture, while at the  
 21 same time Comcast reaffirmed its need for Rovi technology by entering into an  
 22 expanded patent license agreement with Rovi. Indeed, Rick Rioboli, SVP, Comcast  
 23  
 24

25 <sup>8</sup> See *Comcast Timeline*, COMCAST, <http://corporate.comcast.com/news-information/timeline>  
 26 (last visited Dec. 17, 2018).

27 <sup>9</sup> See Comcast Annual Report 2004 at 18.  
 28

1 Metadata Products and Search Services, remarked that “Rovi has been a very  
2 important partner of ours for many years.”<sup>10</sup>

3 61. In 2012, while under license to Rovi’s patents, Comcast launched the X1  
4 IPG Product, which it describes as “a cloud-enabled video platform that transformed  
5 the TV into an interactive, integrated entertainment experience.”<sup>11</sup>

6 62. In 2014, also during the pendency of its then soon-to-expire License to  
7 Rovi’s patents, Comcast introduced the next generation of its X1 IPG Product, which  
8 it describes as “designed to make navigation, search and discovery of content easier  
9 and quicker than ever before. The X1 IPG Product gives customers an interactive TV  
10 experience, providing instant access to all of their Entertainment.”<sup>12</sup>

11 63. As set forth herein, Comcast’s X1 IPG Product is designed to and does  
12 infringe at least one claim of each of the Asserted Patents.

13 64. Comcast has an installed base of several million X1 subscribers and is  
14 continuing to market throughout the United States to further expand the reach of its  
15 X1 IPG Product.<sup>13</sup>

16 65. Even today, Comcast recognizes the critical role that its infringing IPG  
17 platform has in driving product differentiation and consumer demand for its products  
18 and services. For example, Comcast explained to the FCC that “the interface is how  
19 MVPDs [multichannel video program distributors] . . . differentiate themselves in a  
20  
21

22 <sup>10</sup> *Rovi Corporation Sends Letter to Stockholders*, TiVo,  
23 <http://pr.tivo.com/file/4206196/Index?KeyFile=29075378> (last visited Nov. 29, 2018).

24 <sup>11</sup> *See Our Story*, COMCAST, <http://corporate.comcast.com/our-company/our-story>, archived at  
<https://web.archive.org/web/20170519044316/http://corporate.comcast.com/our-company/our-story>.

25 <sup>12</sup> *Id.*

26 <sup>13</sup> *See* Comcast Annual Report 2017 at 3-4 (Comcast’s cable distribution footprint), 40,  
27 available at <https://www.cmcsa.com/static-files/111ba611-eb85-4edc-9000-3907c84697d8>; CMCSA  
- Q4 2017 Comcast Corp Earnings Call at 7, available at <https://www.cmcsa.com/static-files/80bfd80b-e421-43d8-b28b-1be5f1b871d8>.

highly competitive marketplace.”<sup>14</sup> Comcast further explained that, “[f]aced with fierce competition, providers are intent on giving consumers the flexibility they demand to access video programming on the devices of their choice, and delivering more value to customers.”<sup>15</sup>

66. On March 31, 2016, Comcast’s license to use the Rovi technology expired. Comcast refused to execute a new license, yet continues to practice the inventions claimed in Rovi’s patents, and continues to offer, lease, and distribute the X1 product and enhanced IPG platform that not only infringes Rovi’s patents, but could not and would not ever have been lawfully developed but for the license of Rovi’s technology granted to Comcast in the 2004 Agreement, which has now expired.

### III. COMCAST AND ROVI ARE COMPETITORS IN THE DEVELOPMENT AND PROVISION OF IPG SOLUTIONS

67. Comcast markets and provides its Accused Products, including the X1 IPG Product, in the United States to subscribers. Comcast explains to its subscribers and would-be subscribers that the Accused Products, including X1 set-top boxes, provide advanced DVR features covered by the asserted patents. For example, Comcast has branded these DVR features as “X1 AnyRoom DVR,”<sup>16</sup> “X1 Cloud DVR,”<sup>17</sup> and downloading and scheduling recordings on the “Xfinity Stream App”<sup>18</sup> and provides instructions for these features on its website and forums.

<sup>14</sup> See Comments of Comcast Corporation and NBCUniversal Media, LLC, at 34 n.63 (April 22, 2016), available at <http://corporate.comcast.com/images/2016-04-22-AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf>.

<sup>15</sup> *Id.* at 3.

<sup>16</sup> *X1 AnyRoom DVR – What it is and How it Works*, XFINITY, <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Nov. 13, 2018).

<sup>17</sup> *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Nov. 13, 2018).



68. Rovi invests in the development of innovative guide products, including Next-Gen, i-Guide, and Passport that compete directly and indirectly with Comcast's Accused Products in the United States. Rovi's next-generation IPTV products not only provide fundamental DVR functionalities covered by the Asserted Patents, such as "Multi-Room DVR," but also allow users to download recordings to portable devices, such as Smartphones and Tablets, using the TiVo App. And in the first half of 2019, Next-Gen will include network DVR (nDVR) functionality that provides viewers with remote server recording functionality. Rovi's i-Guide and Passport IPG solutions are used by hundreds of small to mid-size cable operators, serving millions of subscribers, to provide fundamental DVR functionalities covered by the Asserted Patents, such as "Multi-Room DVR."

69. Comcast also markets and licenses its Accused Products, including the X1 IPG Product, in the United States to other Pay-TV providers in competition with Rovi as part of its X1 Syndication Platform.<sup>19</sup> As an example of this competition between Rovi and Comcast, Cequel III Programming, LLC d/b/a Suddenlink Communications (Suddenlink) has, for the past several years, licensed Rovi's i-Guide IPG platform, which Suddenlink has deployed to hundreds of thousands of subscribers. Comcast has marketed its X1 syndication product, including the DVR features covered by the Asserted Patents, to Suddenlink, in direct competition to Rovi.

70. In addition, Comcast promoted its infringing products and services by announcing, on April 20, 2016, the launch of its Xfinity TV Partner Program, in order to encourage and enable television and consumer electronics companies to implement

<sup>18</sup> *Get Access to Xfinity Stream*, XFINITY, <https://www.xfinity.com/get-stream> (last visited Nov. 13, 2018).

<sup>19</sup> *Transforming Your Customers' Experience*. COMCAST TECHNOLOGY SOLUTIONS, <https://www.comcasttechnologiesolutions.com/our-portfolio/x1-platform> (last visited Dec. 10, 2018).

Comcast's Xfinity IPG app, which "will provide access to [Comcast's] TV cable service, . . . live and on demand programming and cloud DVR recordings, and will be available on partners' smart TVs, TV-connected devices, and other IP-enabled video devices."<sup>20</sup> Comcast continues to promote its Xfinity TV Partner Program today, advertising "an intuitive user interface, personalized content, and cloud DVR recordings."<sup>21</sup>

71. Upon information and belief, Comcast will continue to market its X1 IPG Product to customers as well as to other Pay-TV providers (including Pay-TV providers that do not have a license to Rovi's patents)—in direct competition with Rovi's own patent-protected IPG products.

#### IV. COMCAST'S INFRINGING PRODUCTS AND SERVICES

72. Upon information and belief, Comcast is in the business of providing digital video, audio, and other content services to customers under the name "Xfinity." Comcast provides its subscribers with at least one Accused Product that is necessary for the receipt of such services.

73. Upon information and belief, Xfinity products and services are provided to consumers through the coordinated and combined participation of Comcast and/or under Comcast's instruction, direction, and/or control. Directly and/or indirectly, Comcast Corporation owns regional subsidiaries that provide telecommunications and video services to customers in a number of states. Xfinity services have been

<sup>20</sup> Mark Hess, *Comcast Seeks TV and Other Consumer Electronics Partners to Bring Xfinity TV Cable Service to More Retail Devices*, COMCAST (Apr. 20, 2016), available at <https://corporate.comcast.com/comcast-voices/comcast-seeks-partners-to-bring-xfinity-tv-cable-service-to-more-retail-devices>; see also Jeff Baumgartner, *Comcast to Stream Its Pay TV Service to LG TVs*, MULTICHANNEL (Sept. 25, 2017), available at <https://www.multichannel.com/news/comcast-stream-its-pay-tv-service-lg-tvs-415485>.

<sup>21</sup> *Xfinity TV Partner Program*, XFINITY, [https://developer.comcast.com/site/tv\\_partner\\_program/index.gsp](https://developer.comcast.com/site/tv_partner_program/index.gsp) (last visited Dec. 11, 2018).

made available to consumers through at least the following regional subsidiaries owned, directly or indirectly, by Comcast Corporation: Comcast of Arkansas/Florida/Louisiana/Minnesota/Mississippi/Tennessee, Inc.; Comcast of Boston, Inc.; Comcast of California II, LLC; Comcast of California III, Inc.; Comcast of California IX, Inc.; Comcast of California/Colorado, LLC; Comcast of California/Colorado/Florida/Oregon, Inc.; Comcast of California/Colorado/Illinois/Indiana/Michigan, LP; Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC; Comcast of California/Massachusetts/Michigan/Utah, LLC; Comcast of Colorado IX, LLC; Comcast of Colorado/Florida/Michigan/New Mexico/Pennsylvania/Washington, LLC; Comcast of Colorado/Pennsylvania/West Virginia, LLC; Comcast of Connecticut, Inc.; Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC; Comcast of Florida/Georgia/Illinois/Michigan, LLC; Comcast of Florida/Georgia/Pennsylvania, L.P.; Comcast of Garden State, L.P.; Comcast of Houston, LLC; Comcast of Illinois VI, Inc.; Comcast of Illinois/Indiana/Ohio, LLC; Comcast of Lompoc, LLC; Comcast of Maine/New Hampshire, Inc.; Comcast of Maryland, LLC; Comcast Cable of Maryland, LLC; Comcast of Massachusetts I, Inc.; Comcast of Massachusetts II, Inc.; Comcast of Massachusetts III, Inc.; Comcast of Massachusetts/New Hampshire, LLC; Comcast of New Jersey II, LLC; Comcast of Oregon II, Inc.; Comcast of Philadelphia II, LLC; Comcast of Potomac, LLC; Comcast of Santa Maria, LLC; Comcast of South Jersey, LLC; Comcast of Southeast Pennsylvania, LLC; Comcast of the South; Comcast of Utah II, Inc.; and Mile Hi Cable Partners, LP (collectively, regional subsidiaries).

74. Upon information and belief, Comcast Corporation and its regional subsidiaries hold themselves out as a single entity in providing the infringing Xfinity products and services. Comcast's various Xfinity services are centrally advertised,

1 documented, and explained on the website, [www.xfinity.com](http://www.xfinity.com). Upon information and  
2 belief, the Comcast regional subsidiaries use identical contracts and other documents  
3 in the provision of the infringing Comcast Xfinity products and services that are  
4 generated and approved by Comcast Corporation and/or collectively by the  
5 aforementioned regional subsidiaries. For example, Comcast Xfinity TV services  
6 have the same “Residential Services Policies” for residential customers, regardless of  
7 their location.<sup>22</sup>

8 75. Upon information and belief, acting through one or more of its officers  
9 and/or its board of directors, Comcast Corporation has: (a) approved and authorized  
10 the development by designated Comcast Corporation subsidiaries of the technology  
11 and infrastructure necessary to offer the Xfinity service to the consuming public;  
12 (b) approved and authorized the capital expenditures by its subsidiaries necessary to  
13 provide the Xfinity service to consumers; and/or (c) authorized and directed its  
14 regional subsidiaries to provide the Xfinity service under the Comcast brand to  
15 consumers in their operating areas. Comcast Corporation further directed and  
16 controlled the activities of its regional subsidiaries. In doing so, Comcast Corporation  
17 (together with the remaining Defendants) actively induced the infringement of such  
18 subsidiaries.

19 76. Comcast markets the Xfinity service to subscribers of each of the  
20 regional subsidiaries described above and actively solicits their business through  
21 Comcast’s website.

22 77. Upon information and belief, Comcast has been involved in the design,  
23 testing, and implementation of the Xfinity service. Upon information and belief,  
24 Comcast provides overall management and coordination of the elements of the  
25

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26 <sup>22</sup> See *Xfinity Terms of Service*, XFINITY, <http://my.xfinity.com/terms/> (last visited Dec. 17,  
27 2018).

1 network used to deliver Comcast's Xfinity services, and of the regional subsidiaries  
2 that own and operate those elements.

3 78. In addition, Comcast has caused and directed at least the regional  
4 subsidiaries to engage in activities, including those activities described above, that  
5 have resulted in the infringement of one or more claims of the Asserted Patents. In  
6 performing the activities that, either individually or in combination, have infringed  
7 one or more claims of the Asserted Patents, the regional subsidiaries have acted as  
8 agents of at least Comcast Corporation, and their infringing activities have been  
9 within the course and scope of that agency.

10 79. Upon information and belief, Comcast does not manufacture the set-top  
11 boxes that it provides to Xfinity customers, but it is closely "involved with the  
12 design, manufacture, and importation" of these Accused Products. *Certain Digital*  
13 *Video Receivers and Hardware and Software Components Thereof*, Inv. No. 337-TA-  
14 1001, Initial Determination, (June 27, 2017) (Final Public Version) at 12. Comcast's  
15 X1 set-top boxes are "so tailored" to Comcast's X1 system that "they would not  
16 function within another cable operator's system." *Id.* (citations omitted).

17 80. Comcast set-top boxes contain, or are designed to receive and execute,  
18 software (including IPG software) enabling a Comcast subscriber to infringe the  
19 Asserted Patents. Upon information and belief, the receivers are specifically  
20 manufactured to be combined with such software for use in Comcast's service  
21 infrastructure. Comcast leases and/or otherwise provides to its subscribers these  
22 receivers along with user guides and manuals describing how to use the receivers and  
23 their associated features.

24 81. In addition, Comcast provides mobile applications, such as the Xfinity  
25 Stream App, for controlling DVR and program guide functionality that are usable  
26 only by paying subscribers to Comcast's Xfinity services. Comcast enables  
27  
28

1 subscribers to download and store DVR recordings on their mobile devices using the  
2 Xfinity Stream App.

3 82. Rovi is informed and believes that Comcast has engaged in activities that  
4 promote the use and distribution of the X1 IPG Product and the Xfinity services and  
5 thereby encourages the infringement of Rovi's patents. Those activities include,  
6 among others, its instructions for X1 subscribers on how to infringe Rovi's patents.  
7 For example, Comcast instructs its subscribers how to use X1 AnyRoom DVR to  
8 watch recorded shows on any X1 TV Box they have in the home.<sup>23</sup> As another  
9 example, Comcast informs its subscribers that they can, from Comcast's websites,  
10 "[l]earn how to download cloud-based DVR recordings and available Xfinity On  
11 Demand content to your Apple or Android device. We'll show you how to download  
12 and check in recordings and On Demand programs using the Apple version of the  
13 mobile app."<sup>24</sup>

14 83. Rovi is informed and believes that, in or before 2012, Comcast was  
15 considering ways: (a) to promote the adoption of its X1 IPG platform, which  
16 extensively utilizes Rovi's patented technology, as an industry standard; (b) to have  
17 new applications and enhancements to its platform developed; and (c) to avoid the  
18 research and development cost of developing such new applications and  
19 enhancements.

20 84. Upon information and belief, the solution to meet those three goals was  
21 for Comcast to develop a defined stack of software on one layer of an operating set-  
22 top box. Comcast made significant "effort[s] to get vendors such as original  
23

24 <sup>23</sup> *X1 AnyRoom DVR – What It Is and How It Works*, XFINITY,  
25 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Oct. 10, 2018).

26 <sup>24</sup> *Download Cloud-Based DVR Recordings and Xfinity On Demand Content to Your Device*,  
27 XFINITY, <https://www.xfinity.com/support/articles/x1-xfinity-tv-app-download-a-program> (last  
28 visited Oct. 10, 2018).



1 equipment manufacturers (OEMs), semiconductor manufacturers, software vendors,  
 2 software integrators and multichannel video programming distributors to create an  
 3 ecosystem for new gear for cloud-based and hybrid video services like Comcast's X1  
 4 service."<sup>25</sup> Comcast is substantially involved in the design and manufacture of the  
 5 receivers, including set-top boxes, onto which the infringing Comcast IPGs are  
 6 loaded.

7 85. Upon information and belief, Comcast obtains significant quantities of  
 8 specially designed, unlicensed receivers, including set-top boxes, from third parties.

9 86. Upon information and belief, over half of Comcast's 22 million  
 10 subscribers are on the X1 platform.<sup>26</sup> Comcast has had and continues to have  
 11 significant involvement in the importation and distribution of receivers. Comcast has  
 12 held itself out as the "supplier" of its receivers, including its set-top boxes that it  
 13 distributes to its subscribers. For example, in connection with the FCC filing made by  
 14 Comcast relating to the potential merger of Comcast and Time Warner, Comcast  
 15 repeatedly referred to "Comcast-supplied set-top boxes," and characterized set-top  
 16 boxes used in connection with the X1 platform as "Comcast's."<sup>27</sup>

17 87. Upon information and belief, these Comcast receivers contain, or are  
 18 designed to receive and execute, software (including IPG software) enabling  
 19 advanced DVR features such as: recording programs on one device and playing back  
 20

21 <sup>25</sup> *News and Events, Pace licenses RDK set top design kit from Comcast*, RDK CENTRAL,  
 22 <http://rdkcentral.com/test/pace-licenses-rdk-set-top-design-kit-from-comcast/> (last visited Dec. 18,  
 23 2018); *see also* Deborah D. McAdams, *Motorola Mobility Licenses Comcast RDK*, TVTECHNOLOGY  
 (Aug. 22, 2012), [http://www.tvtechnology.com/news/0002/motorola-mobility-licenses-comcast-](http://www.tvtechnology.com/news/0002/motorola-mobility-licenses-comcast-rdk/215089)  
 rdk/215089 (noting Comcast's attempts to license RDK).

24 <sup>26</sup> David Hayes, *Comcast X1 Subscribers Can Get Epix In Early 2018 Under New Distribution*  
 25 *Deal*, DEADLINE (Nov. 28, 2017, 9:33 AM), [http://deadline.com/2017/11/comcast-x1-subscribers-](http://deadline.com/2017/11/comcast-x1-subscribers-get-epix-in-early-2018-under-new-distribution-deal-1202215657/)  
 get-epix-in-early-2018-under-new-distribution-deal-1202215657/.

26 <sup>27</sup> *See generally In re Comcast Corp.*, MB Dkt. No. 14-57, Opp'n to Pets. to Deny & Resp. to  
 27 Comments (Sept. 23, 2014), *available at* <http://apps.fcc.gov/ecfs/document/view?id=7522909787>.



those programs on another device; watching programs from a point prior to when the program was tuned to using a remote server; beginning watching a program on one device and resuming watching the program on another device or choosing an option to resume watching from a prior point; causing a program to be transferred from a first storage device to a second storage device and stored for later playback, and managing directories of remote server recordings. Comcast designs the infringing IPG software that is loaded onto such receivers (and for which purpose such receivers were designed).

88. Upon information and belief, Xfinity products and services are provided to consumers through the coordinated and combined participation of Comcast and/or under Comcast's instruction, direction, and/or control.

**V. COMCAST REFUSES TO RENEW ITS LICENSE—  
NOTWITHSTANDING LITIGATION AND FINDINGS OF  
INFRINGEMENT OF CERTAIN ROVI PATENTS**

89. On April 1, 2016, Rovi sued Comcast in two district court actions for infringing various patents not asserted here. One of those actions is stayed in the Southern District of New York (Case No. 1:16-cv-09826). The other action is partially stayed in the Southern District of New York while proceeding on certain claims. (Case No. 1:16-cv-09278).

90. On April 6, 2016, Rovi brought an enforcement action against Comcast in the International Trade Commission for importing products that infringe various patents—again, patents not asserted here. In November 2017, the Commission found that Comcast's X1 STBs infringed two of those patents, excluded future imports of these boxes, and ordered Comcast not to import or distribute infringing products. *See generally In re Certain Digital Video Receivers & Hardware & Software Components Thereof*, Inv. No. 337-TA-1001, Comm'n Op. (Dec. 6, 2017) (Final Public Version).

91. On January 10, 2018, Rovi again sued Comcast in two district court actions for infringing various patents not asserted here. On February 8, 2018, Rovi brought an enforcement action against Comcast in the International Trade Commission for importing products that infringe these same patents (Inv. No. 337-TA-1103). The two district court actions are stayed in the Central District of California (Case No. 2:18-cv-00253) and the District of Massachusetts (Case No. 1:18-cv-10056) pending the resolution of the enforcement action in the International Trade Commission.

92. And yet even after the ITC orders, and even despite the currently pending actions, Comcast refuses to renew its License to Rovi's portfolio. Comcast continues to make, use, sell, offer to sell, lease, offer to lease, import, and distribute products that infringe Rovi's patents, including the Asserted Patents in this Complaint. Comcast continues to violate Rovi's intellectual property rights with impunity and use Rovi's technology for free, while all of Comcast's competitors agree to pay a reasonable price for a license to Rovi's valuable patent portfolio.

### **FIRST CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 9,055,319**

93. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-92 of this Complaint.

94. The '319 Patent is valid and enforceable under United States Patent Laws.

95. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '319 Patent, including the right to collect for past damages.

96. A certified copy of the '319 Patent is attached as Exhibit A.

### **The '319 Patent**

97. The '319 Patent describes, among other things, a system for playing back recorded programs on a different device than the device that recorded the program. The patent discloses that a first device (e.g., an STB) records a program in response to a user request. The first device later receives a request to playback the program from another device (e.g. a second STB) and transmits the program to the second device. The second device receives the transmitted program from the first device and generates the received program for display on a screen.

98. As the '319 Patent describes, the user may initiate a record request for a program:

When a user indicates a desire to record a program or program grouping on remote media server 24 or local media server 29 (and possibly a desire to confirm recording of the program), the program guide generates a record request that is transmitted to the appropriate remote media server by communications device 51 (FIG. 9) via communications path 20 or 31. The record request may include, for example, an identifier for the program that the user wishes to record, an identifier for the user, and, if desired, any other information related to the program and the user. If the user indicated a desire to record a program grouping, the request may include a grouping identifier or the program identifiers of the constituent programs.

'319 Patent at 22:12-24.

99. In response, a media server may record the program, store any associated program guide data, and provide a directory:

At the time a selected program or program in a grouping airs (which may be the time at which the program is selected for recording), remote media server 24 or local media server 29 may record the program and any associated program guide data. Program guide data may be stored as files associated with the program using pointers. Once the selected program is recorded, remote media server 24 or local media server 29 may provide a copy of user directory 59 to the program guide if the program guide maintains a copy of user directories. Alternatively, remote media server 24 or local media server 29 may provide a pointer to the location of the program on media store 63. In still another suitable approach, user directories 59 may be maintained solely by remote media server 24 or local media server 29 and

provided to the program guide on request.

'319 Patent at 22:12-39.

100. The user can access the directory of recorded programs in a number of ways and the system may use an overlay to display the directory:

The program guide may provide the user with the opportunity to access a directory or other such list of programs that have been recorded for the user on remote media server 24 or local media server 29. The user may indicate a desire to access a directory or list of recorded programs by, for example, pressing a "DIR" key on remote control 40 or selecting a "Directory" feature from main menu 107. FIGS. 18 a and 18 b show illustrative overlays 320 that may be displayed by the program guide when the user indicates a desire to view a directory of the programs that the user has recorded on remote media server 24 or local media server 29. FIG. 18 a shows overlay 320 overlaid on top of the video of the channel that the viewer is watching. FIG. 18 b shows overlay 32 overlaid on top of a program listings screen. Overlay 320 may display any information related to the programming that the user has selected for recording by remote media server 24 or local media server 29. Overlay 320 may display, for example, the channels and titles of the recorded programs, the dates and times they are recorded, or any other suitable information.

Program listings for recorded programs may be organized by channel, theme, user, or by any other suitable criteria. In practice, program listings for recorded programs may be displayed in overlays based on the type of display screen over which the overlays are displayed. In FIG. 18 b, for example, listings are displayed by time because the display screen over which they are displayed displays program listings by time. FIG. 18 c shows listings of recorded programs in the movies category, because the display screen over which they are displayed only displays listings for movies. FIGS. 18 b and 18 c are illustrative and any suitable criteria may be used. In addition, program listings may be displayed using display criteria or based on themes when the program listings are overlaid on top of a video the user is watching.

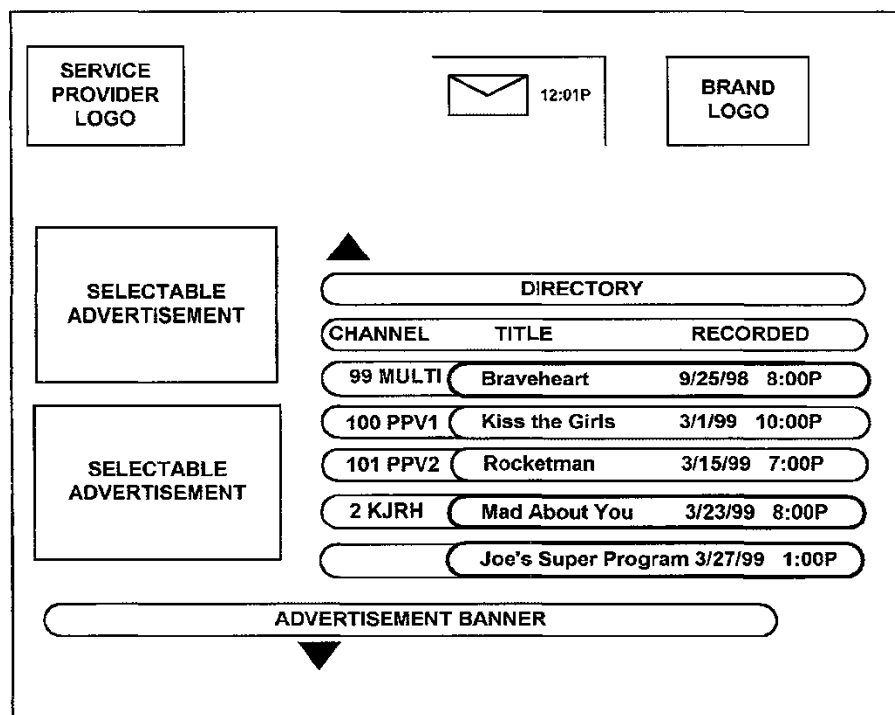
'319 Patent at 22:47-23:12.

101. The '319 Patent provides illustrative directory screens that may be displayed by the program guide:

FIG. 18d shows an illustrative directory screen 350 that may be displayed by the program guide when the user indicates a desire to view a directory of the programs that the user has

recorded on remote media server 24 or local media server 29. Directory screen 350 may display program-related information like that displayed by overlay 320. Directory screen 350 may also include other program guide display screen elements, such as selectable advertisements, service provider logos, brand logos, advertisement banners, etc.

**350**



**FIG. 18d**

'319 Patent at 23:13-21, FIG. 18d.

102. Using the directory, the user can playback a recorded program on demand:

The program guide may provide users with the opportunity to play programs on demand that users have previously

recorded on remote media server 24 or local media server 29. Remote media server 24 or local media server 29 may play programs on-demand in response to playback requests generated by the program guide. As used herein, “playback request” is intended to mean any command, request, message, remote procedure call, object based communication, or any other type of interprocess or inter-object based communication whereby the program guide may communicate information to a media server specifying which program the user wishes to play back. The program guide may generate playback requests when a user indicates a desire to view a program that has been recorded. The user may indicate a desire to view a program that has been recorded by, for example, highlighting a listing in a directory or list and pressing a “PLAY” key on remote control 40.

When the user indicates a desire to view a program that has been recorded, the program guide generates a playback request that is transmitted by communications device 51 to remote media server 24 or local media server 29 via communications path 20 or 31.

’319 Patent at 25:16-38.

### **Historical Context of the ’319 Patent**

103. Over the years, cable, satellite, and broadcast television providers have offered an increasingly large number of television channels and television program listings. Traditionally, users would consult printed television program schedules to determine the programs being broadcast at particular times. ’319 Patent at 1:26-30. In the years leading up to the ’319 Patent, interactive electronic television program guides allowed users to more easily navigate television program information. ’319 Patent at 1:30-32. These IPGs frequently organized the various television program listings in a grid, wherein each row in the grid contains television program listings for a different channel, and each column in the grid corresponds to a determined broadcast time. ’319 Patent at 1:32-37.

104. Some systems allowed for programs selected with a set-top box (STB) to be recorded and stored on a videocassette recorder. While the use of a VCR provided

1 the benefits of basic recording, the functionality was very limited. '319 Patent at  
2 1:49-62.

3 105. Other systems that used hard disk technology to store programs were  
4 available, but these systems suffered from the need for multiple additional hardware  
5 to provide functionality throughout a user's home, significantly increasing the cost of  
6 the user's home television equipment. '319 Patent at 2:1-10.

7 106. Video-on-demand (VOD) systems were also available, but these systems  
8 fell short in that they either required vast amounts of storage at the server to ensure  
9 that all possible videos desired by users will be available or were limited to only a  
10 subset of programs that the operator decided to record. '319 Patent at 2:21-28.

11 107. The inventors of the '319 Patent disclosed novel systems and methods  
12 that provided an interactive program guide system that allows users to decide to  
13 record certain programs on one device that later may be played back to the user on  
14 demand from another device. These novel systems and methods allow subscribers to  
15 choose the content to be recorded and expand the amount of content that can be  
16 available to subscribers on demand, while reducing costs through shared DVR  
17 storage.

### 18 **'319 Patent Allegations**

19 108. On information and belief after reasonable investigation, Comcast  
20 markets the infringing functionality as "AnyRoom DVR".<sup>28</sup> On information and  
21 belief and after reasonable investigation, Comcast provides the X1 system, which  
22 allows a user to playback a program recorded on another device using an IPG  
23 implemented on user equipment (the '319 Accused Products). Further, on  
24 information and belief and after reasonable investigation, Comcast performs the  
25

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26 <sup>28</sup> *X1 AnyRoom DVR – What It Is and How It Works*, XFINITY,  
27 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Oct. 15, 2018).



1 methods claimed in the '319 Patent by allowing a user to playback a program  
2 recorded on another device using an IPG implemented on user television equipment  
3 on the Comcast X1 system.

4 109. Comcast has infringed and is infringing, individually and/or jointly,  
5 either literally or under the doctrine of equivalents, at least claims 1-3, 5-10, 12-17,  
6 19-21, 23-25, and 27-29 of the '319 Patent in violation of 35 U.S.C. §§ 271, *et seq.*,  
7 directly and/or indirectly, by making, using, offering for sale, selling, offering for  
8 lease, leasing in the United States, and/or importing into the United States without  
9 authority or license, set-top boxes, including without limitation, one or more of the  
10 '319 Accused Products and associated software (including at least the Xfinity  
11 branded IPG) that are used to infringe the '319 Patent. Upon information and belief  
12 after reasonable investigation, each of the '319 Accused Products are designed to be  
13 and are used with each other and Comcast's servers to enable a user to playback a  
14 recording from another device.

15 110. Comcast is an active inducer of infringement of one or more claims of  
16 the '319 Patent under 35 U.S.C. § 271(b). Upon information and belief, one or more  
17 of the '319 Accused Products of Comcast directly and/or indirectly infringe (by  
18 induced infringement) at least claims 1-3, 5-10, 12-17, 19-21, 23-25, and 27-29 of the  
19 '319 Patent, literally and/or under the doctrine of equivalents.

20 111. This Complaint will serve as notice to Comcast of the '319 Patent and its  
21 infringement should Comcast contend that it did not previously have knowledge  
22 thereof.

23 112. Comcast intentionally encourages and aids at least service providers and  
24 end-user subscribers to directly infringe the '319 Patent.

25 113. Comcast provides the '319 Accused Products and instructions to Xfinity  
26 subscribers so that such subscribers will use the '319 Accused Products in a directly  
27 infringing manner. Comcast markets the Xfinity System to subscribers by touting that  
28

1 “X1 AnyRoom DVR allows you to watch recorded shows on any X1 TV Box you  
 2 have in the home.”<sup>29</sup> Comcast provides instructions to its subscribers on how to use  
 3 the functionality of the ’319 Patent on this website as well. Comcast further instructs  
 4 its subscribers how to use X1 AnyRoom DVR to watch recorded shows on any X1  
 5 TV Box they have in the home.

6 114. Comcast subscribers directly infringe by using the ’319 Accused  
 7 Products in their intended manner. Comcast induces such infringement by providing  
 8 the ’319 Accused Products and instructions to enable and facilitate infringement.  
 9 Upon information and belief, Comcast specifically intends that its actions will result  
 10 in infringement of the ’319 Patent or has taken deliberate actions to avoid learning of  
 11 infringement.

12 115. Additional allegations regarding Comcast’s knowledge of the ’319 Patent  
 13 may have evidentiary support after a reasonable opportunity for discovery.

14 116. Comcast’s infringement of the ’319 Patent is exceptional and entitles  
 15 Rovi to attorneys’ fees and costs incurred in prosecuting this action under 35 U.S.C.  
 16 § 285.

17 117. Rovi has been damaged by Comcast’s infringement of the ’319 Patent  
 18 and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has  
 19 suffered and continues to suffer irreparable injury for which there is no adequate  
 20 remedy at law. The balance of hardships favors Rovi, and public interest is not  
 21 disserved by an injunction.

22 118. Rovi is entitled to recover from Comcast all damages that Rovi has  
 23 sustained as a result of Comcast’s infringement of the ’319 Patent, including without  
 24 limitation, lost profits and not less than a reasonable royalty.

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25  
 26 <sup>29</sup> *X1 AnyRoom DVR – What It Is and How It Works*, XFINITY,  
 27 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Oct. 15, 2018).

**SECOND CLAIM FOR RELIEF**

**INFRINGEMENT OF U.S. PATENT NO. 8,448,215**

119. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-118 of this Complaint.

120. The '215 Patent is valid and enforceable under United States Patent Laws.

121. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '215 Patent.

122. A certified copy of the '215 Patent is attached as Exhibit B.

**The '215 Patent**

123. The '215 Patent describes, among other things, an interactive program guide method and system for transferring programs from one device to another in response to receiving a user selection of a program listing and storing the program on the second device.

124. As the '215 Patent describes, the user may transfer a recorded program to a secondary storage device:

The program guide may also allow the user to transfer programs and super-programs stored on digital storage device 49 to other volumes of digital storage device 49 or to secondary storage device 47 (FIG. 3). Secondary storage device 47 may be another storage device available in the home network system like a videocassette recorder, a recordable digital video disc device, a computer (with an appropriate storage device), or other digital storage device. This feature may be accessed by, for example, issuing appropriate commands with user interface 46. If user interface 46 is a remote control such as remote control 40 of FIG. 2, the user may use a "record" or "transfer" key when in the super-program screen, or; for example, the user may select a "transfer" option from an on-screen list of options provided by the program guide in response to the user selecting a super-program from directory listing screen 90.

'215 Patent at 13:44-59.

1           125. The transfer of the recorded program is performed using the program  
2 guide:

3           The program guide responds to this indication by issuing  
4 appropriate instructions to digital storage device 49 to read  
5 the selected programs and associated data or the programs  
6 and associated data of the selected super-program sequence.  
7 The program guide then transfers the programs and  
8 associated data (if possible) in an appropriate format to  
secondary program data storage device 47. If, for example,  
secondary storage device 47 is a videocassette recorder, the  
program guide directs user television equipment 22 to  
convert the digitally stored program or super-program into  
an appropriate analog format.

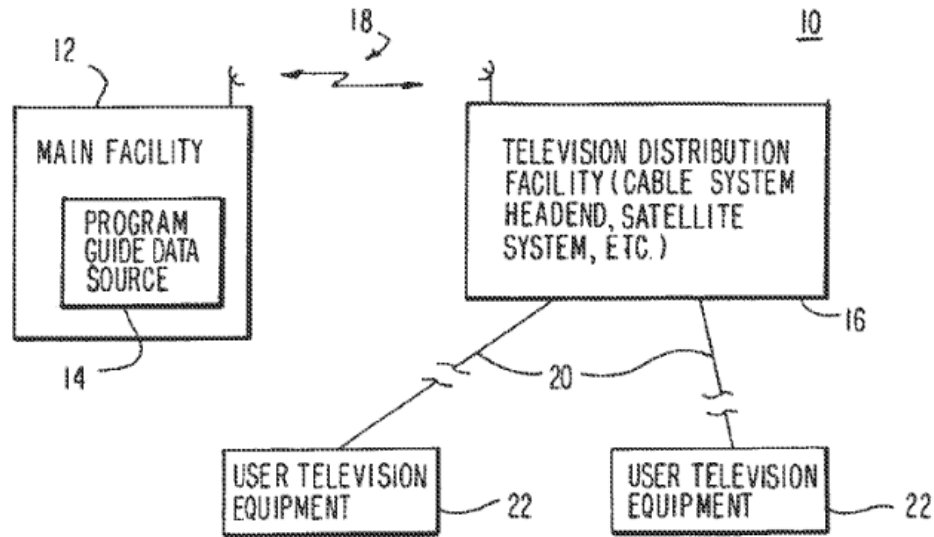
9           '215 Patent at 13:60-14:3.

10           126. The user initiates the transfer through a user input interface, such as a  
11 touchscreen on a mobile device:

12           The user controls the operation of user television equipment  
13 22 with user input interface 46. User input interface 46 may  
14 be a pointing device, wireless remote control, keyboard,  
15 touch-pad, voice recognition system, or any other suitable  
16 user input device. To watch television, the user instructs  
17 control circuitry 42 to display a desired television channel  
on monitor 45. To access the features of the program guide,  
the user instructs the program guide implemented on user  
television equipment 22 to generate a main menu or a  
desired program guide display screen for display on monitor  
45.

18           '215 Patent at 4:52-61.

19           127. Figure 1 of the '215 Patent is a schematic block diagram of a system in  
20 accordance with the present invention.

**FIG. 1****Historical Context of the '215 Patent**

128. As detailed above, the '215 Patent relates to interactive program guide systems in which programs can be transferred to and stored on multiple devices.

129. Over the years, cable, satellite and broadcast television providers have offered a large number of television channels. Users traditionally consulted printed television program schedules to determine programs being broadcast at a particular time. '215 Patent at 1:22-26. And at the time of the '215 patent, interactive electronic television program guides allowed users to navigate through television program listings displayed on user televisions with remote controls. '215 Patent at 1:26-31. These interactive program guides often organized program listings in a program listings grid, wherein each row corresponded to a different program and each column corresponded to a different broadcast time. '215 Patent at 1:31-41.

130. Interactive television guides allowed for storage of programs selected within the program guide on independent storage devices, such as videocassette

1 recorders. '215 Patent at 1:42-45. However, independent storage devices such as  
 2 videocassette recorders did not allow for the more advanced features possible with  
 3 the interactive program guide, including the ability to use the interactive program  
 4 guide to store a program on multiple storage devices. *See* '215 Patent at 1:48-51.

5 131. The inventors of the '215 Patent disclosed novel methods and systems  
 6 that provided the ability to transfer and store programs on multiple storage devices  
 7 using the interactive program guide.

### 8 **'215 Patent Allegations**

9 132. On information and belief after reasonable investigation, Comcast  
 10 markets the infringing functionality as the "Download" feature available on the  
 11 Xfinity Stream App for both On Demand and Cloud DVR recordings.<sup>30</sup> On  
 12 information and belief after reasonable investigation, Comcast provides the X1  
 13 system, which allows a user to transfer an On Demand program or recording from  
 14 one storage device to another storage device using an IPG implemented on user  
 15 equipment (the '215 Accused Products). Further, on information and belief after  
 16 reasonable investigation, Comcast performs the methods claimed in the '215 Patent  
 17 by allowing a user to transfer an On Demand program or recording from one storage  
 18 device to another storage device using an IPG implemented on user television  
 19 equipment in the Comcast X1 system.

20 133. Comcast has infringed and is infringing, individually and/or jointly,  
 21 either literally or under the doctrine of equivalents, at least claims 1-4, 6-8, 10, 11-14,  
 22 16-18, and 20 of the '215 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly  
 23 and/or indirectly, by making, using, offering for sale/lease, leasing, distributing in the  
 24 United States, and/or importing into the United States without authority or license,

25  
 26 <sup>30</sup> *Download Cloud-Based DVR Recordings and Xfinity On Demand Content to Your Device*,  
 27 XFINITY, <https://www.xfinity.com/support/articles/x1-xfinity-tv-app-download-a-program> (last  
 28 visited Oct. 10, 2018).

1 set-top boxes, including without limitation, one or more of the Accused Products  
2 ('215 Accused Products) and associated software (including at least the Xfinity  
3 branded IPG and mobile applications) that are used to infringe one or more claims of  
4 the '215 Patent. On information and belief after reasonable investigation, each of the  
5 '215 Accused Products are designed to be and are used with each other and  
6 Comcast's servers to enable a user to transfer an On Demand program or recording  
7 from one storage device to another storage device.

8 134. Comcast has been, and currently is, an active inducer of infringement of  
9 one or more claims of the '215 Patent under 35 U.S.C. § 271(b). On information and  
10 belief after reasonable investigation, one or more of the '215 Accused Products of  
11 Comcast directly and/or indirectly infringe (by induced infringement) one or more  
12 claims of the '215 Patent, literally and/or under the doctrine of equivalents.

13 135. Comcast has had actual knowledge of the '215 Patent since at least  
14 September 23, 2014, when Rovi provided claim charts to Comcast mapping the  
15 Defendants' products to the '215 Patent.

16 136. Rovi again provided Comcast notice of the '215 Patent by identifying the  
17 '215 Patent in a list of Rovi patents sent to Comcast in April 2015.

18 137. This Complaint will serve as notice to Comcast of the '215 Patent and its  
19 infringement should Comcast contend that it did not previously have knowledge  
20 thereof.

21 138. Comcast intentionally encourages and aids at least service providers and  
22 end-user subscribers to directly infringe the '215 Patent.

23 139. Comcast provides the '215 Accused Products and instructions to Xfinity  
24 subscribers so that subscribers will use the '215 Accused Products in a directly  
25 infringing manner. Comcast markets the Xfinity System to subscribers by touting that  
26  
27  
28



1 subscribers can “download your favorites to watch anywhere, even if you’re offline.  
 2 It’s all included with any Xfinity TV package.”<sup>31</sup> Comcast provides instructions to its  
 3 subscribers on how to use the functionality of the ’215 Patent and states that  
 4 subscribers can “[l]earn how to download cloud-based DVR recordings and available  
 5 Xfinity On Demand content to your Apple or Android device. We’ll show you how to  
 6 download and check in recordings and On Demand programs using the Apple version  
 7 of the mobile app. The procedures are essentially the same for the Android mobile  
 8 app, but the steps or screens may be slightly different.”<sup>32</sup>

9 140. Comcast subscribers directly infringe by using the ’215 Accused  
 10 Products in their intended manner. Comcast induces such infringement by providing  
 11 the ’215 Accused Products and instructions to enable and facilitate infringement. On  
 12 information and belief, Comcast specifically intend that its actions will result in  
 13 infringement of the ’215 Patent or has taken deliberate actions to avoid learning of  
 14 infringement.

15 141. Additional allegations regarding Comcast’s knowledge of the ’215 Patent  
 16 and willful infringement will likely have evidentiary support after a reasonable  
 17 opportunity for discovery.

18 142. Comcast’s infringement of the ’215 Patent is willful and deliberate,  
 19 entitling Rovi to enhanced damages and attorneys’ fees.

20 143. Comcast’s infringement of the ’215 Patent is exceptional and entitles  
 21 Rovi to attorneys’ fees and costs incurred in prosecuting this action under 35 U.S.C.  
 22 § 285.

23  
 24  
 25 <sup>31</sup> *Our Best Streaming Experience*, XFINITY, <https://www.xfinity.com/get-stream> (last visited Oct. 10, 2018).

26 <sup>32</sup> *Download Cloud-Based DVR Recordings and Xfinity On Demand Content to Your Device*,  
 27 XFINITY, <https://www.xfinity.com/support/articles/x1-xfinity-tv-app-download-a-program> (last visited Oct. 10, 2018).

1 144. Rovi has been damaged by Comcast's infringement of the '215 Patent  
2 and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has  
3 suffered and continues to suffer irreparable injury for which there is no adequate  
4 remedy at law. The balance of hardships favors Rovi, and public interest is not  
5 disserved by an injunction.

6 145. Rovi is entitled to recover from Comcast all damages that Rovi has  
7 sustained as a result of Comcast's infringement of the '215 Patent, including without  
8 limitation, lost profits and not less than a reasonable royalty.

9  
10 **THIRD CLAIM FOR RELIEF**

11 **INFRINGEMENT OF U.S. PATENT NO. 8,973,069**

12 146. Plaintiff realleges and incorporates by reference the allegations of  
13 paragraphs 1-145 of this Complaint.

14 147. The '069 Patent is valid and enforceable under United States Patent  
15 Laws.

16 148. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and  
17 to the '069 Patent.

18 149. A certified copy of the '069 Patent is attached as Exhibit C.

19 **The '069 Patent**

20 150. The '069 Patent describes, among other things, an interactive method and  
21 system for pausing media content displayed on a first user equipment device, storing  
22 position information indicative of the pause point, receiving an indication at a second  
23 user equipment device to view the media content, and presenting options to a user  
24 that are determinative of the viewing point from which the media content is displayed  
25 on the second user equipment device. The specification of the '069 Patent refers to  
26 this functionality as "relocate." E.g., '069 Patent at 10:27-39.

1 151. As the '069 Patent describes, the relocate feature allows a user to pause a  
2 program and resume from another location:

3 A relocate feature may be included in the on-demand media  
4 system. This relocate feature may allow a user to freeze  
5 media-on demand content being presented on one user  
6 equipment and switch to some other user equipment to  
7 resume the presentation of the media on-demand content  
8 (i.e., resume from the point at which the user had frozen the  
9 content). The user equipment may be equipment such as  
user equipment 260 and 265 of FIG. 2. If the user wants to  
continue watching the on-demand media content at a friend's  
house (e.g., user equipment system 265 of FIG. 2), the user  
may only have to use the relocate feature to freeze the on-  
demand media content and relocate to the friend's house to  
resume the on-demand media content.

10 '069 Patent at 10:27-39.

11 152. The relocate feature may be implemented using a server to pause and  
12 resume the program:

13 When the relocate feature is first selected by a user, remote  
14 server network 110 of FIG. 1 may, for example, pause the  
on-demand media content being viewed by the user and  
15 store a content location reference to an appropriate user-  
specific account. After the user switches to a different  
16 location and requests that the paused content be  
appropriately delivered, remote server network 110 may  
17 retrieve the appropriate content location reference and  
continue delivering the media content from the point at  
18 which the user paused the content. Before the media content  
may be delivered, the remote server network may require  
19 that the user be identified so that the appropriate user-  
specific data and/or a user-specific account information,  
20 may be located and accessed.

21 '069 Patent at 11:10-22.

22 153. The server saves the position information for the program to identify  
23 where the program was paused:

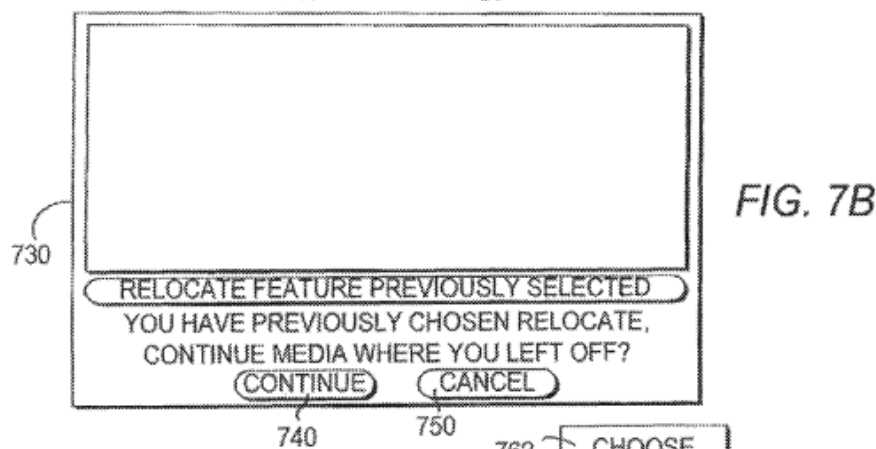
24 The on-demand media system may then save the user's  
current position (step 763) when the user selects the relocate  
25 feature. Saving the current position may involve, for  
example, saving a pointer that identifies where the media  
26 content was 'frozen' or paused by the relocate feature. If the  
user was identified in step 771, process 760 may store any  
27 data relevant to the operation of the relocate feature in  
storage space associated with the user. If desired, saving the  
28 current position may involve recording the media content

from the point at which the relocate feature was chosen. At step 764, process 760 may enter an idle mode until a user selects to resume reception. Step 764 may include step 772 for identifying the current user (e.g., identifying a current user on a second user equipment). Step 772 may be performed when a user selects to resume media using the relocate feature. At step 772, the system may provide a current user with the ability to log into the on-demand media system, which may include prompting the user for an identification and/or password. If desired, step 772 may be performed before the current user selects to resume media using the relocate feature.

'069 Patent at 11:51-12:3.

154. The '069 Patent provides an exemplary relocation display screen for resuming the paused program:

FIG. 7B shows illustrative relocation display screen 750 that may be displayed when a command from remote control 300 of FIG. 3 is selected or when an appropriate option on an on-demand media display screen is selected to resume on-demand media that was frozen earlier by the user. Option 740 may be selected if a user wants to start to view the media from the frozen point on user equipment that is different (e.g., different household, different subscriber site, different room, different equipment platform, etc.) than that which was used to freeze the media.



'069 Patent at 10:54-63.

155. The system allows the program to be presented from the pause point at a different location using different equipment:

When a user selects continue option 740, the media may be presented on the current user equipment starting from the frozen point. If desired, media may be queued to the frozen

1 point for presentation to a user when a user who had  
2 previously selected a freeze (or relocated) option logs into  
3 the system. Also, if desired, the media may be queued  
4 selectively upon user request (e.g., user selects a resume  
5 from frozen point option). If the user has not previously  
6 logged in or otherwise been identified, the user may be  
7 asked to log in or asked to provide identification information  
8 when making a resume request. The system may also allow  
9 the user to select from multiple programs which may have  
10 been previously frozen by the user.

11 '069 Patent at 10:64-11:9.

### 12 **Historical Context of the '069 Patent**

13 156. At the time of the '069 Patent, set-top boxes received on-demand video  
14 from cable system headends, and set-top boxes could communicate that on-demand  
15 video to local devices such as television sets. However, these systems were deficient  
16 in that they did not allow users to continue watching on-demand programs from a  
17 different location (e.g., another room). '069 Patent at 1:25-35.

18 157. Also at the time of the '069 Patent, systems used recording technology,  
19 such as hard disk technology, to store videos of programs locally. However, these  
20 systems were deficient in that they did not allow users continued access to recorded  
21 materials from another location (e.g., another room). '069 Patent at 1:36-46.

22 158. Systems existed that included a return path from a user's set-top box to a  
23 cable system headend. This allowed for client-server-based program guides that used  
24 two-way communication between cable system headends and set-top boxes. Some of  
25 these client-server television program guides recorded programs on a remote server.  
26 However, these arrangements were still deficient in providing mobility features that  
27 would allow users to relocate and still access programming.

28 159. The inventors of the '069 Patent disclosed novel interactive media guide  
methods and systems that allowed users to begin watching media content on one user  
equipment device and thereafter display the same media content on a second user

1 equipment device with options as to the viewing point at which to resume the media  
2 content.

### 3 **'069 Patent Allegations**

4 160. On information and belief after reasonable investigation, Comcast  
5 markets this infringing functionality as “AnyRoom DVR”<sup>33</sup> and “Xfinity Stream.”<sup>34</sup>  
6 On information and belief after reasonable investigation, Comcast provides the X1  
7 system, which allows a user to pause media content on one device and continue  
8 watching the media content on another device using an interactive program guide  
9 implemented at least in part on user equipment (the '069 Accused Products). Further,  
10 on information and belief after reasonable investigation, Comcast performs the  
11 methods claimed in the '069 Patent by allowing a user to pause media content on one  
12 device and continue watching the media content on another device using an  
13 interactive program guide implemented on user television equipment in the X1  
14 system.

15 161. Comcast has infringed and is infringing, individually and/or jointly,  
16 either literally or under the doctrine of equivalents, at least claims 1-3, 9, 11-13, and  
17 19 of the '069 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or  
18 indirectly, by making, using, offering for lease, leasing, distributing in the United  
19 States, and/or importing into the United States without authority or license, set-top  
20 boxes, including without limitation, one or more of the '069 Accused Products and  
21 associated software (including at least the Xfinity branded IPG) that are used to  
22 infringe the '069 Patent. On information and belief after reasonable investigation, the  
23

24 <sup>33</sup> *X1 AnyRoom DVR – What it is and How it Works*, XFINITY,  
25 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Oct. 11, 2018).

26 <sup>34</sup> *Xfinity Stream TV App*, XFINITY, <https://www.xfinity.com/get-stream> (last visited Oct. 11,  
27 2018).  
28

1 '069 Accused Products are designed to be and are used with each other and  
 2 Comcast's servers to enable a user to pause media content on a first user equipment  
 3 device and resume the media content on a second device. On information and belief  
 4 after reasonable investigation, Comcast markets this infringing functionality as  
 5 "AnyRoom DVR"<sup>35</sup> and "Xfinity Stream."<sup>36</sup> On information and belief after  
 6 reasonable investigation, Comcast provides the '069 Accused Products, which allow  
 7 a user to pause media content on one device and continue watching the media content  
 8 on another device using an interactive program guide implemented at least in part on  
 9 user equipment devices. Further, on information and belief after reasonable  
 10 investigation, Comcast performs the methods claimed in the '069 Patent by allowing  
 11 a user to pause media content on one device and continue watching the media content  
 12 on another device using an interactive program guide implemented on user  
 13 equipment devices in the X1 system.

14 162. Comcast is an active inducer of infringement of one or more claims of  
 15 the '069 Patent under 35 U.S.C. § 271(b). On information and belief after reasonable  
 16 investigation, one or more of the '069 Accused Products of Comcast directly and/or  
 17 indirectly infringe (by induced infringement) one or more claims of the '069 Patent,  
 18 literally and/or under the doctrine of equivalents.

19 163. This Complaint will serve as notice to Comcast of the '069 Patent and its  
 20 infringement should Comcast contend that it did not previously have knowledge  
 21 thereof.  
 22  
 23

24 <sup>35</sup> *X1 AnyRoom DVR – What it is and How it Works*, XFINITY,  
 25 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Oct. 11, 2018).

26 <sup>36</sup> *Xfinity Stream TV App*, XFINITY, <https://www.xfinity.com/get-stream> (last visited Oct. 11,  
 27 2018).  
 28



1 164. Comcast intentionally encourages and aids at least service providers and  
2 end-user subscribers to directly infringe the '069 Patent.

3 165. Comcast provides the '069 Accused Products and instructions to Xfinity  
4 subscribers so that such subscribers will use the '069 Accused Products in a directly  
5 infringing manner. Comcast markets the Xfinity System to subscribers by touting the  
6 ability to “[b]egin a recorded show on your TV and resume watching it on another  
7 TV”<sup>37</sup> and the ability to “[g]et the entertainment you love anywhere, on any  
8 device.”<sup>38</sup> Comcast provides instructions to its subscribers on how to use the  
9 functionality of the '069 Patent on these websites.

10 166. Comcast subscribers directly infringe by using the '069 Accused  
11 Products in their intended manner. Comcast induces such infringement by providing  
12 the '069 Accused Products and instructions to enable and facilitate infringement. On  
13 information and belief after reasonable investigation, Comcast specifically intends  
14 that its actions will result in infringement of the '069 Patent or has taken deliberate  
15 actions to avoid learning of infringement.

16 167. Additional allegations regarding Comcast’s knowledge of the '069 Patent  
17 may have evidentiary support after a reasonable opportunity for discovery.

18 168. Comcast’s infringement of the '069 Patent is exceptional and entitles  
19 Rovi to attorneys’ fees and costs incurred in prosecuting this action under 35 U.S.C.  
20 § 285.

21 169. Rovi has been damaged by Comcast’s infringement of the '069 Patent  
22 and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has  
23 suffered and continues to suffer irreparable injury for which there is no adequate  
24

25 <sup>37</sup> *X1 AnyRoom DVR – What it is and How it Works*, XFINITY,  
26 <https://www.xfinity.com/support/articles/x1-anyroom-dvr-overview> (last visited Oct. 11, 2018).

27 <sup>38</sup> *Xfinity Stream TV App*, XFINITY, <https://www.xfinity.com/get-stream> (last visited Oct. 11,  
28 2018).

1 remedy at law. The balance of hardships favors Rovi, and public interest is not  
2 disserved by an injunction.

3 170. Rovi is entitled to recover from Comcast all damages that Rovi has  
4 sustained as a result of Comcast's infringement of the '069 Patent, including without  
5 limitation, lost profits and not less than a reasonable royalty.

#### 6 **FOURTH CLAIM FOR RELIEF**

#### 7 **INFRINGEMENT OF U.S. PATENT NO. 7,873,978**

8 171. Plaintiff realleges and incorporates by reference the allegations of  
9 paragraphs 1-170 of this Complaint.

10 172. The '978 Patent is valid and enforceable under United States Patent  
11 Laws.

12 173. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and  
13 to the '978 Patent.

14 174. A certified copy of the '978 Patent is attached as Exhibit D.

#### 15 **The '978 Patent**

16 175. The '978 Patent describes, among other things, an interactive television  
17 program guide system in which television programs are recorded and retrieved on-  
18 demand and stored for later playback for a number of users. The patent discloses  
19 generating a record request with an interactive program guide for a user, recording a  
20 program with a remote media server in response to the record request, generating a  
21 retrieval request with an interactive program guide for a user, retrieving the program  
22 with the remote media server, and storing the retrieved program for later playback.

23 176. As the '978 Patent describes, an interactive program guide may be used  
24 to record and playback programs using a server:

25  
26 Programs and program guide data may be recorded and  
27 played back on-demand by remote media server 24 in  
28 response to record and playback requests. Record and  
playback requests may be generated by a program guide

server application or web application implemented on Internet service system 235. Record and playback requests may also be generated by an interactive program guide client implemented on personal computer 231 and may be provided to remote media server 24 by Internet service system 235. Programs and program guide data may be provided by Internet service system 235 to personal computer 231 using a suitable real-time Internet video approach (e.g., using the M-Bone), or may be downloaded and stored by personal computer 231 for playback.

'978 Patent at 8:40-53.

177. The server may also record data associated with the program selected for recording:

Remote media server 24 of FIGS. 2a, 2b, 2c, 2d, and 2e records programs, program guide data, or any suitable combination thereof and supplies either or both to user television equipment 22 in response to requests generated by the program guide. Remote media server 24 may also record program associated data, such as data carried in the vertical blanking interval (VBI) of an analog television channel or in a digital data track on a digital television channel. Examples of program associated data are subtitles, text tracks, music information tracks, additional video formats, additional languages, or other additional data. As used herein, recording and playing back "programming" or "programs" may include, but does not require, recording and playing back program associated data. Remote media server 24 is shown as being located at program guide distribution facility 16, but may be located at a separate distribution facility (e.g., a cable system headend, a broadcast distribution facility, a satellite television distribution facility, or any other suitable type of television distribution facility).

'978 Patent at 8:54-9:5.

178. Figure 2e of the '978 Patent is an exemplary schematic diagram of an equipment environment in which a preferred embodiment of the interactive program guide system of the '978 Patent can operate.

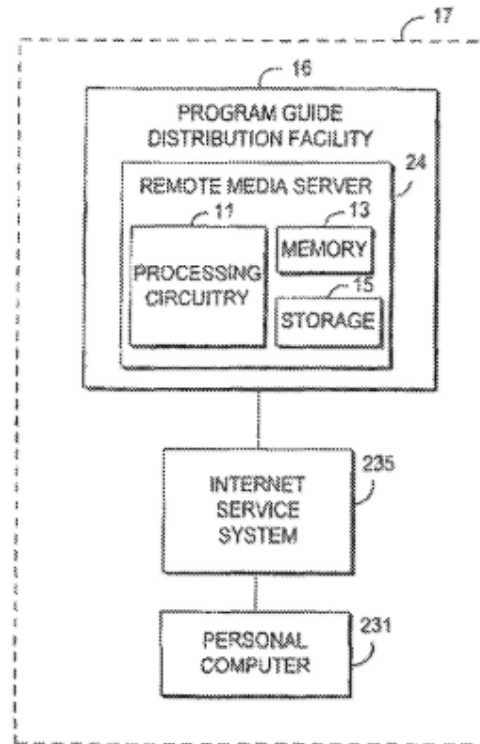


FIG. 2e

179. In response to a retrieval request generated by an interactive program guide, the server may retrieve recorded programs from storage on demand for later playback:

Remote media server 24 retrieves programs from storage 15 in response to retrieval requests generated by the program guides implemented on interactive program guide television equipment 17. Processing circuitry 11 may process the requests by searching a user's user directory 59 for the requested programs and then issuing a suitable retrieval command (or request) to storage 15 based on the pointer in the directory. For example, when user 1 requests the playing of PROGRAM 1, processing circuitry 11 issues an appropriate retrieval command to optical storage tower 53. The program is retrieved from media store 63 and may be passed to memory 13 (e.g., via DMA circuitry in processing circuitry 11) for decoding by processing circuitry 11 and distribution to user television equipment 22. If desired, processing circuitry may pass a requested program in its digital form to distribution equipment 21 for distribution to user television equipment 22.

'978 Patent at 11:65-12:14.

### **Historical Context of the '978 Patent**

180. Cable, satellite, and broadcast television providers offer a large number of television channels. In the past, viewers had to consult printed television program schedules to determine which programs were being broadcast at particular times. '978 Patent at 1:20-24. In the years leading up to the '978 Patent, interactive electronic television program guides allowed users to more easily navigate television program information with the use of a remote control. '978 Patent at 1:24-28. These interactive television program guides typically organized the various television program listings in a list, grid, or table. '978 Patent at 1:28-31.

181. Some systems allowed for programs selected with a STB to be recorded and stored on a videocassette recorder (VCR). While the use of a VCR provided the benefits of basic recording, the functionality was very limited. '978 Patent at 1:32-61.

182. Other systems that used hard disk technology to store programs were available, but these systems suffered from the need for multiple additional hardware to provide functionality throughout a user's home, significantly increasing the cost of the user's home television equipment. '978 Patent at 1:62-2:6.

183. Video-on-demand (VOD) systems were also available, but these systems fell short in that they either required vast amounts of storage at the server to ensure that all possible videos desired by users will be available or were limited to only a subset of programs that the operator decided to record. '978 Patent at 2:15-23.

184. The inventors of the '978 Patent disclosed novel systems and methods that provided an interactive television program guide system in which television programs are recorded and retrieved on-demand and stored for later playback for a number of users.

### **'978 Patent Allegations**

185. On information and belief after reasonable investigation, Comcast markets the infringing functionality as the "Download" feature available on the

1 Xfinity Stream App for both On Demand and Cloud DVR recordings.<sup>39</sup> On  
 2 information and belief after reasonable investigation, Comcast provides the X1  
 3 system, which allow subscribers to request to record programs at remote servers and  
 4 request to retrieve the recorded programs for storage and later playback using an IPG  
 5 implemented on user television equipment (the '978 Accused Products). Further, on  
 6 information and belief after reasonable investigation, Comcast performs the methods  
 7 claimed in the '978 Patent by allowing a user to record programs at remote servers  
 8 and retrieve the recorded programs for storage and later playback.

9 186. Comcast has infringed and is infringing, individually and/or jointly,  
 10 either literally or under the doctrine of equivalents, claims 1-8 of the '978 Patent in  
 11 violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using,  
 12 offering for lease, leasing, distributing in the United States, and/or importing into the  
 13 United States without authority or license, set-top boxes, including without  
 14 limitation, one or more of the '978 Accused Products that infringe claims 1-8 of the  
 15 '978 Patent. On information and belief after reasonable investigation, each of the  
 16 '978 Accused Products are designed to be and are used with each other and  
 17 Comcast's servers to record programs at remote servers and retrieve the recorded  
 18 programs for storage and later playback in response to user requests with an  
 19 interactive program guide.

20 187. Comcast has been, and currently is, an active inducer of infringement of  
 21 claims 1-8 of the '978 Patent under 35 U.S.C. § 271(b). On information and belief  
 22 after reasonable investigation, one or more of the '978 Accused Products of the  
 23 Comcast directly and/or indirectly infringes (by induced infringement) claims 1-8 of  
 24 the '978 Patent, literally and/or under the doctrine of equivalents.

25  
 26 <sup>39</sup> *Download Cloud-Based DVR Recordings and Xfinity On Demand Content to Your Device*,  
 27 XFINITY, <https://www.xfinity.com/support/articles/x1-xfinity-tv-app-download-a-program> (last  
 28 visited Oct. 10, 2018).

188. Comcast has had actual knowledge of the '978 Patent since at least September 23, 2014, when Rovi provided a claim chart of the '978 Patent mapping Comcast's infringing functionality to the claims of the '978 Patent.

189. Rovi again provided Comcast notice of the '978 Patent by identifying the '978 Patent in a list of Rovi patents sent to Comcast in April 2015.

190. This Complaint will serve as notice to Comcast of the '978 Patent and its infringement should Comcast contend that it did not previously have knowledge thereof.

191. Comcast intentionally encourages and aids at least service providers and end-user subscribers to directly infringe the '978 Patent.

192. Comcast provides the '978 Accused Products and instructions to Xfinity subscribers so that such subscribers will use the '978 Accused Products in a directly infringing manner. Comcast markets the Xfinity System to subscribers and provides instructions to its subscribers on how to "download cloud-based DVR recordings and available Xfinity On Demand content" to devices for later playback.<sup>40</sup>

193. Comcast subscribers directly infringe by using the '978 Accused Products in their intended manner. Comcast induces such infringement by providing the '978 Accused Products and instructions to enable and facilitate infringement. *Id.* On information and belief after reasonable investigation, Comcast specifically intends that its actions will result in infringement of the '978 Patent or has taken deliberate actions to avoid learning of infringement.

194. Additional allegations regarding Comcast's knowledge of the '978 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

<sup>40</sup> *Download Cloud-Based DVR Recordings and Xfinity On Demand Content to Your Device*, XFINITY, <https://www.xfinity.com/support/articles/x1-xfinity-tv-app-download-a-program> (last visited Oct. 11, 2018).



1 195. Comcast's infringement of the '978 Patent is willful and deliberate,  
2 entitling Rovi to enhanced damages and attorneys' fees.

3 196. Comcast's infringement of the '978 Patent is exceptional and entitles  
4 Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C.  
5 § 285.

6 197. Rovi has been damaged by Comcast's infringement of the '978 Patent  
7 and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has  
8 suffered and continues to suffer irreparable injury for which there is no adequate  
9 remedy at law. The balance of hardships favors Rovi, and public interest is not  
10 disserved by an injunction.

11 198. Rovi is entitled to recover from Comcast all damages that Rovi has  
12 sustained as a result of Comcast's infringement of the '978 Patent, including without  
13 limitation, lost profits and not less than a reasonable royalty.

#### 14 **FIFTH CLAIM FOR RELIEF**

#### 15 **INFRINGEMENT OF U.S. PATENT NO. 9,232,254**

16 199. Plaintiff realleges and incorporates by reference the allegations of  
17 paragraphs 1- 198 of this Complaint.

18 200. The '254 Patent is valid and enforceable under United States Patent  
19 Laws.

20 201. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and  
21 to the '254 Patent.

22 202. A certified copy of the '254 Patent is attached as Exhibit E.

#### 23 **The '254 Patent**

24 203. The '254 Patent describes, among other things, a method and system of  
25 providing users with access to respective directories of recorded programs recorded  
26 at a remote server using a program guide. The '254 Patent discloses receiving a  
27

1 program at a remote server from a broadcast source, recording the program on the  
 2 remote server in response to a request from a user equipment on a network different  
 3 than that of the remote server, and maintaining and enabling access to respective user  
 4 directories for each user of a plurality of user equipment.

5 204. As the '254 Patent describes, an interactive program guide may be used  
 6 to record and playback programs using a server:

7 Programs and program guide data may be recorded and  
 8 played back on-demand by remote media server 24 in  
 9 response to record and playback requests. Record and  
 10 playback requests may be generated by a program guide  
 11 server application or web application implemented on  
 12 Internet service system 235. Record and playback requests  
 13 may also be generated by an interactive program guide client  
 14 implemented on personal computer 231 and may be  
 15 provided to remote media server 24 by Internet service  
 16 system 235. Programs and program guide data may be  
 17 provided by Internet service system 235 to personal  
 18 computer 231 using a suitable real-time Internet video  
 19 approach (e.g., using the M-Bone), or may be downloaded  
 20 and stored by personal computer 231 for playback.

21 '254 Patent at 8:47-60.

22 205. The server may also record data associated with the program selected for  
 23 recording:

24 Remote media server 24 of FIGS. 2 a, 2 b, 2 c, 2 d, and 2 e  
 25 records programs, program guide data, or any suitable  
 26 combination thereof and supplies either or both to user  
 27 television equipment 22 in response to requests generated by  
 28 the program guide. Remote media server 24 may also record  
 program associated data, such as data carried in the vertical  
 blanking interval (VBI) of an analog television channel or in  
 a digital data track on a digital television channel. Examples  
 of program associated data are subtitles, text tracks, music  
 information tracks, additional video formats, additional  
 languages, or other additional data. As used herein,  
 recording and playing back "programming" or "programs"  
 may include, but does not require, recording and playing  
 back program associated data.

'254 Patent at 8:61-9:7.

206. The user can access the directory of recorded programs in a number of  
 ways and the system may use an overlay to display the directory:

The program guide may provide the user with the opportunity to access a directory or other such list of programs that have been recorded for the user on remote media server 24 or local media server 29. The user may indicate a desire to access a directory or list of recorded programs by, for example, pressing a “DIR” key on remote control 40 or selecting a “Directory” feature from main menu 107. FIGS. 18 a and 18 b show illustrative overlays 320 that may be displayed by the program guide when the user indicates a desire to view a directory of the programs that the user has recorded on remote media server 24 or local media server 29. FIG. 18 a shows overlay 320 overlaid on top of the video of the channel that the viewer is watching. FIG. 18 b shows overlay 32 overlaid on top of a program listings screen. Overlay 320 may display any information related to the programming that the user has selected for recording by remote media server 24 or local media server 29. Overlay 320 may display, for example, the channels and titles of the recorded programs, the dates and times they are recorded, or any other suitable information.

’254 Patent at 22:45-63.

207. The ’254 Patent describes an illustrative directory screen for the directory of recorded programs:

FIG. 18 d shows an illustrative directory screen 350 that may be displayed by the program guide when the user indicates a desire to view a directory of the programs that the user has recorded on remote media server 24 or local media server 29. Directory screen 350 may display program-related information like that displayed by overlay 320. Directory screen 350 may also include other program guide display screen elements, such as selectable advertisements, service provider logos, brand logos, advertisement banners, etc. If desired, directory screen 350 may be displayed as an overlay and any of the overlays described herein may be presented as display screens. Such display screens may be either full screen display screens or partial screen display screens. Partial screen display screens may contain a reduced-size video window (e.g., for displaying the current television channel).

’254 at 23:11-25.

208. The ’254 Patent provides the illustrative directory screen that may be displayed:

FIG. 18 d shows an illustrative directory screen that may be displayed by the program guide when a user indicates a desire to access a directory of programs recorded for a user on the remote media server of FIGS. 2 a-2 e or the local

media server of FIG. 7.

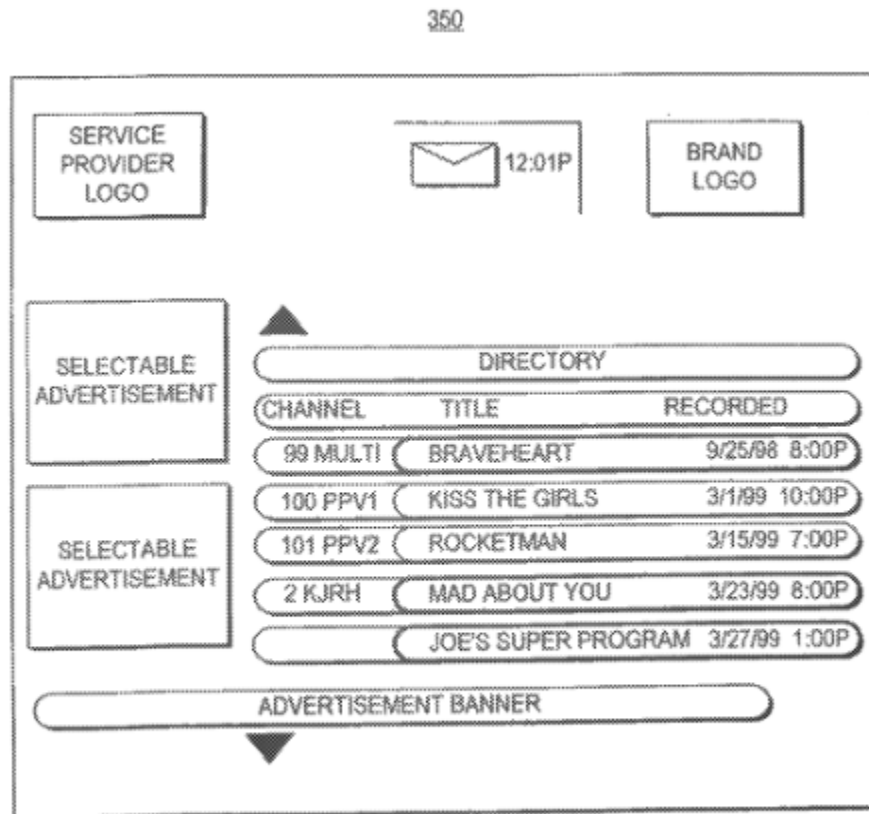


FIG. 18d

### **Historical Context of the '254 Patent**

209. Cable, satellite, and broadcast television providers offer viewers a large number of television channels. At the time of the '254 Patent, viewers had to consult printed television program schedules to determine which programs were being broadcast at particular times. '254 Patent at 1:24-28. Also at the time of the '254 Patent, interactive electronic television program guides allowed users to more easily navigate television program information with the use of a remote control. '254 Patent at 1:30-32. These interactive television program guides typically organized the various television program listings in a list, grid, or table. '254 Patent at 1:32-35.

210. Some systems allowed for programs selected with a STB to be recorded and stored on a VCR. While the use of a VCR provided the benefits of basic recording, the functionality was very limited. '254 Patent at 1:36-65.

211. Other systems that used hard disk technology to store programs were available, but these systems suffered from the need for multiple additional hardware to provide functionality throughout a user's home, significantly increasing the cost of the user's home television equipment. '254 Patent at 1:66-2:10.

212. Video-on-demand (VOD) systems were also available, but these systems fell short in that they either required vast amounts of storage at the server to ensure that all possible videos desired by users will be available or were limited to only a subset of programs that the operator decided to record. '254 Patent at 2:19-26.

213. The inventors of the '254 Patent disclosed novel systems and methods that provided an interactive television program guide system that provides users with access to respective directories of recorded programs recorded at a remote server.

### **'254 Patent Allegations**

214. On information and belief after reasonable investigation, Comcast markets this infringing functionality as "Cloud DVR."<sup>41</sup> On information and belief after reasonable investigation, Comcast provides the X1 system, which allows subscribers to request recordings on remote servers and access their respective user directories of recorded programs on remote servers using an IPG implemented on user television equipment (the '254 Accused Products). On information and belief after reasonable investigation, Comcast performs the methods claimed in the '254 Patent by allowing subscribers to request recordings on remote servers and access their respective user directories of recorded programs on remote servers.

<sup>41</sup> *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Oct. 12, 2018).

215. Comcast has infringed and is infringing, individually and/or jointly, either literally or under the doctrine of equivalents, at least claims 1-8, 10-19, and 21-22 of the '254 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using, offering for lease, leasing, distributing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the '254 Accused Products that infringe the '254 Patent. On information and belief after reasonable investigation, each of the '254 Accused Products are designed to be and are used with each other and Comcast's servers to enable subscribers to schedule recordings on remote servers and to provide subscribers with access to respective directories of recorded programs recorded at a remote server.

216. Comcast is an active inducer of infringement of at least claims 1-8, 10-19, and 21-22 of the '254 Patent under 35 U.S.C. § 271(b). On information and belief after reasonable, one or more of the '254 Accused Products of Comcast directly and/or indirectly infringe (by induced infringement) at least claims 1-8, 10-19, and 21-22 of the '254 Patent, literally and/or under the doctrine of equivalents.

217. This Complaint will serve as notice to Comcast of the '254 Patent and its infringement should Comcast contend that they did not previously have knowledge thereof.

218. Comcast intentionally encourages and aids at least service providers and end-user subscribers to directly infringe the '254 Patent.

219. Comcast provides the '254 Accused Products and instructions to Xfinity subscribers so that such subscribers will use the '254 Accused Products in a directly infringing manner. Comcast markets the Xfinity System to subscribers by touting the ability to "record TV shows and movies in 'the cloud.'"<sup>42</sup> Comcast provides

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<sup>42</sup> *Record and Play Back Programs with X1 Cloud DVR, XFINITY,*



1 instructions to its subscribers on how to use the functionality of the '254 Patent on  
2 Comcast's websites.<sup>43</sup>

3 220. Comcast subscribers directly infringe by using the '254 Accused  
4 Products in their intended manner to infringe. Comcast induces such infringement by  
5 providing the '254 Accused Products and instructions to enable and facilitate  
6 infringement.<sup>44</sup> On information and belief after reasonable investigation, Comcast  
7 specifically intends that its actions will result in infringement of the '254 Patent or  
8 has taken deliberate actions to avoid learning of infringement.

9 221. Additional allegations regarding Comcast's knowledge of the '254 Patent  
10 may have evidentiary support after a reasonable opportunity for discovery.

11 222. Comcast's infringement of the '254 Patent is exceptional and entitles  
12 Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C.  
13 § 285.

14 223. Rovi has been damaged by Comcast's infringement of the '956 Patent  
15 and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has  
16 suffered and continues to suffer irreparable injury for which there is no adequate  
17 remedy at law. The balance of hardships favors Rovi, and public interest is not  
18 disserved by an injunction.

19 224. Rovi is entitled to recover from Comcast all damages that Rovi has  
20 sustained as a result of Comcast's infringement of the '254 Patent, including without  
21 limitation, lost profits and not less than a reasonable royalty.

22  
23  
24 <https://www.xfinity.com/support/articles/x1-dvr-with-cloud-technology-recording-and-playback>  
25 (last visited Oct. 12, 2018).

26 <sup>43</sup> See, e.g., *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Oct. 12, 2018).

27 <sup>44</sup> *Id.*



**SIXTH CLAIM FOR RELIEF**

**INFRINGEMENT OF U.S. PATENT NO. 8,272,019**

225. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1- 224 of this Complaint.

226. The '019 Patent is valid and enforceable under United States Patent Laws.

227. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '019 Patent.

228. A certified copy of the '019 Patent is attached as Exhibit F.

**The '019 Patent**

229. The '019 Patent describes, among other things, a method and system for managing programs stored on a remote media server. The patent discloses providing user equipment with data associated with a list of programs stored at the media server, receiving delete requests from program guides displayed at user equipment, and responsively deleting programs from a remote media server.

230. As the '019 Patent describes, a server may record programs selected for recording:

The remote media server may be located at a program guide distribution facility or other suitable distribution facility (e.g., a cable system headend, a broadcast distribution facility, a satellite television distribution facility, or any other suitable type of television distribution facility). The remote media server may record programs and, if desired, program guide data. The remote media server may also record data associated with programs, such as data carried in a vertical blanking interval (VBI) or in a digital data track. The programs, program associated data, program guide data or any suitable combination thereof, may be recorded in response to requests generated by the interactive television program guide. Programs recorded by the remote media server may be distributed to users using any suitable video-on-demand or near-video-on-demand approach. Users may also have local media servers (e.g., personal computers) in their homes for recording programs and, if desired, program guide data.

1 '019 Patent at 3:1-21.

2 231. The server may also record data associated with the program selected for  
3 recording:

4 Remote media server 24 of FIGS. 2 a, 2 b, 2 c, 2 d, and 2 e  
5 records programs, program guide data, or any suitable  
6 combination thereof and supplies either or both to user  
7 television equipment 22 in response to requests generated by  
8 the program guide. Remote media server 24 may also record  
9 program associated data, such as data carried in the vertical  
10 blanking interval (VBI) of an analog television channel or in  
11 a digital data track on a digital television channel. Examples  
12 of program associated data are subtitles, text tracks, music  
13 information tracks, additional video formats, additional  
languages, or other additional data. As used herein,  
recording and playing back "programming" or "programs"  
may include, but does not require, recording and playing  
back program associated data. Remote media server 24 is  
shown as being located at program guide distribution facility  
16, but may be located at a separate distribution facility  
(e.g., a cable system headend, a broadcast distribution  
facility, a satellite television distribution facility, or any  
other suitable type of television distribution facility).

14 '019 Patent at 8:57-9:8.

15 232. The '019 Patent describes the hardware and software for the server  
16 recording the programs:

17 Remote media server 24 may be based on any suitable  
18 combination of hardware and software suitable for recording  
19 and playing back programs or program guide data on  
20 demand. As defined herein, the phrase "recording on-  
21 demand" refers to recording a program or program guide  
22 data in response to a user's selection of a program for  
recording. The actual recording of a program need not take  
place at the same time that such a selection is made. For  
example, a program may be selected for recording before its  
scheduled broadcast time and may be recorded when the  
selected program is aired.

23 Remote media server 24 may include processing circuitry  
24 11, memory 13, and storage 15. Processing circuitry 11 may  
25 include any suitable processor, such as a microprocessor or  
26 group of microprocessors, and other processing circuitry  
27 such as caching circuitry, direct memory access (DMA)  
28 circuitry, digitizing circuitry, and input/output (I/O)  
circuitry. Processing circuitry 11 may also include circuitry  
suitable for decoding program and data files stored on  
storage 15 and converting them to suitable video signals for  
distribution by distribution equipment 21. If programming is

1 stored as Moving Pictures Experts Group (MPEG) MPEG-2  
2 files, processing circuitry 11 may include, for example, an  
3 MPEG-2 decoder for decoding the files and converting them  
4 to National Television Standards Committee (NTSC) video.  
5 In another suitable approach, processing circuitry passes the  
6 MPEG-2 files to distribution equipment 21 for distribution  
7 to users as an MPEG-2 data stream. The MPEG-2 data  
8 stream may be decoded and displayed by user television  
9 equipment 22.

10 '019 Patent at 9:9-37.

11 233. The interactive program guide allows users to manage the stored  
12 programs, including deleting programs no longer desired:

13 The program guide may also provide users with an  
14 opportunity to manage what is stored on remote media  
15 server 24 and local media server 29. The program guide  
16 may, for example, provide users with an opportunity to  
17 delete programs that are no longer desired. The user may  
18 indicate a desire to delete a program by, for example,  
19 highlighting a listing for a recorded program and pressing a  
20 "DEL" key on remote control 40, by selecting an on-screen  
21 feature of a program guide display screen such as feature  
22 159 of full information screen 161 (FIG. 20), or using any  
23 other suitable approach. When the user indicates a desire to  
24 delete a recorded program, the program guide may generate  
25 a delete request that is transmitted to remote media server 24  
26 or local media server 29 by communications device 51.  
27 Delete requests may be any suitable request, message,  
28 object-based communication, remote procedure call, etc.

'019 Patent at 27:43-58.

234. The server processes the delete request as appropriate and updates the  
directory:

After receiving a delete request, remote media server 24 (for  
users from within the same or different households) or local  
media server 29 (for users from within the same household)  
may determine whether more than one user has requested a  
copy of the selected program. If only one user has requested  
that the program be recorded, remote media server 24 may  
issue a delete command to the storage device that stores the  
program selected for deletion. The appropriate storage  
device deletes the selected program from its media store 63  
(FIG. 4) and media directories 61 and user directory 59 are  
updated accordingly. If more than one user has requested  
that the program be recorded, remote media server 24 may  
delete the entry in user directory 59 for that program. If the  
program guide maintains a user directory 59, the program  
guide may delete the entry. Local media servers may delete

1 programs in a similar manner.

2 '019 Patent at 27:59-28:7.

3 **Historical Context of the '019 Patent**

4 235. Cable, satellite, and broadcast television providers offer viewers a large  
5 number of television channels. At the time of the '019 Patent, viewers needed to  
6 consult printed television program schedules to determine which programs were  
7 being broadcast at particular times. '019 Patent at 1:23-26. Also at the time of the  
8 '019 Patent, interactive electronic television program guides allowed users to more  
9 easily navigate television program information with the use of a remote control. '019  
10 Patent at 1:26-31. These interactive television program guides typically organized the  
11 various television program listings in a list, grid, or table. '019 Patent at 1:30-33.

12 236. Some systems allowed for programs selected with a STB to be recorded  
13 and stored on a VCR. While the use of a VCR provided the benefits of basic  
14 recording, the functionality was very limited. '019 Patent at 1:39-63.

15 237. Other systems that used hard disk technology to store programs were  
16 available, but these systems suffered from the need for multiple additional hardware  
17 to provide functionality throughout a user's home, significantly increasing the cost of  
18 the user's home television equipment. '019 Patent at 1:64-2:8.

19 238. Video-on-demand (VOD) systems were also available, but these systems  
20 fell short in that they either required vast amounts of storage at the server to ensure  
21 that all possible videos desired by users will be available or were limited to only a  
22 subset of programs that the operator decided to record. '019 Patent at 2:17-24.

23 239. The inventors of the '019 Patent disclosed novel systems and methods for  
24 managing and responsively deleting programs stored on a remote media server.

**'019 Patent Allegations**

240. On information and belief after reasonable investigation, Comcast markets this infringing functionality as “Cloud DVR.”<sup>45</sup> On information and belief after reasonable investigation, Comcast provides the X1 system, which allows subscribers to delete programs stored on remote servers using an IPG implemented on user television equipment (the '019 Accused Products). On information and belief after reasonable investigation, Comcast performs the methods claimed in the '019 Patent by allowing subscribers to delete programs stored on remote servers.

241. Comcast has infringed and is infringing, individually and/or jointly, either literally or under the doctrine of equivalents, one or more claims of the '019 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using, offering for lease, leasing, distributing in the United States, and/or importing into the United States without authority or license, including without limitation, one or more of the Accused Products (hereafter the '019 Accused Products) that infringe at least claims 1-3 and 11-13 of the '019 Patent. On information and belief after reasonable investigation, each of the '019 Accused Products are designed to be and are used with each other and Comcast's servers to delete programs stored on remote servers.

242. Comcast has been, and currently is, an active inducer of infringement of at least claims 1-3 and 11-13 of the '019 Patent under 35 U.S.C. § 271(b). Upon information and belief, one or more of the '019 Accused Products of Comcast directly and/or indirectly infringe (by induced infringement) at least claims 1-3 and 11-13 of the '019 Patent, literally and/or under the doctrine of equivalents.

<sup>45</sup> *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Oct. 12, 2018).

243. Comcast has had actual knowledge of the '019 Patent since at least September, 23, 2014, when Rovi provided a claim chart to Comcast illustrating Comcast's infringement of the '019 Patent.

244. Rovi again provided Comcast notice of the '019 Patent by identifying the '019 Patent in a list of Rovi patents sent to Comcast in April 2015.

245. This Complaint will serve as notice to Comcast of the '019 Patent and its infringement should Comcast contend that it did not previously have knowledge thereof.

246. Comcast intentionally encourages and aids at least service providers and end-user subscribers to directly infringe the '019 Patent.

247. Comcast provides the '019 Accused Products and instructions to Xfinity subscribers so that such subscribers will use the '019 Accused Products in a directly infringing manner. Comcast provides instructions to its subscribers on how to use the functionality of the '019 Patent on its website.<sup>46</sup>

248. Comcast subscribers directly infringe by using the '019 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the '019 Accused Products and instructions to enable and facilitate infringement. Upon information and belief, Comcast specifically intends that its actions will result in infringement of the '019 Patent or has taken deliberate actions to avoid learning of infringement.

249. Additional allegations regarding Comcast's knowledge of the '019 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

<sup>46</sup> *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Oct. 12, 2018).



1 250. Comcast's infringement of the '019 Patent is willful and deliberate,  
2 entitling Rovi to enhanced damages and attorneys' fees.

3 251. Comcast's infringement of the '019 Patent is exceptional and entitles  
4 Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C.  
5 § 285.

6 252. Rovi has been damaged by Comcast's infringement of the '019 Patent  
7 and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has  
8 suffered and continues to suffer irreparable injury for which there is no adequate  
9 remedy at law. The balance of hardships favors Rovi, and public interest is not  
10 disserved by an injunction.

11 253. Rovi is entitled to recover from Comcast all damages that Rovi has  
12 sustained as a result of Comcast's infringement of the '019 Patent, including without  
13 limitation, lost profits and not less than a reasonable royalty.

14 **SEVENTH CLAIM FOR RELIEF**

15 **INFRINGEMENT OF U.S. PATENT NO. 7,735,107**

16 254. Plaintiff realleges and incorporates by reference the allegations of  
17 paragraphs 1-253 of this Complaint.

18 255. The '107 Patent is valid and enforceable under United States Patent  
19 Laws.

20 256. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and  
21 to the '019 Patent.

22 257. A certified copy of the '107 Patent is attached as Exhibit G.

23 **The '107 Patent**

24 258. The '107 Patent describes, among other things, a method and system of  
25 receiving a broadcast program, tuning to the broadcast program in response to a user  
26 input, recording the broadcast program on a local storage device, recording the  
27



1 broadcast program on a remote server, and in response to a user input, allowing the  
2 user to watch a portion of the broadcast program stored on the remote server from a  
3 point prior to when the broadcast program was tuned to.

4 259. As the '107 Patent describes, the system uses an interactive program  
5 guide for tuning:

6 The program guide data transmitted by main facility 12 to  
7 interactive program guide television equipment 17 may  
8 include television programming data (e.g., program  
9 identifiers, times, channels, titles, and descriptions) and  
10 other data for services other than television program listings  
11 (e.g., help text, pay-per-view information, weather  
12 information, sports information, music channel information,  
13 associated Internet web links, associated software, etc.). The  
14 program guide data may also include unique identifiers for  
15 each showing of each program, identifiers for program  
16 groupings (e.g., series, mini-series, orderable packages of  
17 programs, etc.), or any other suitable identifier. As used  
18 herein television "program" and "programming" are  
19 intended to mean any type of show or advertisement carried  
20 on a regular, premium, pay-per-view, music, or other type of  
21 television channel, and may include movies, pay-per-view  
22 programs, sporting events, music programs, commercials  
23 and any other suitable type of television program.

24 '107 Patent at 5:60-6:10.

25 260. The interactive program guide may be deployed in multiple  
26 configurations:

27 The interactive television program guide may run totally on  
28 user television equipment 22 using the arrangements of  
FIGS. 2 a and 2 c, or may run partially on user television  
equipment 22 and partially on interactive program guide  
television equipment 17 using a suitable client-server or  
distributed processing arrangement such as those shown in  
FIGS. 2 b and 2 d. Program guide distribution facility 16  
may be any suitable distribution facility, and may have  
distribution equipment 21.

'107 Patent at 6:33-41.

261. Using the interactive program guide, a user may request a remote and/or  
local server record programs and program data:

The remote media server may be located at a program guide  
distribution facility or other suitable distribution facility  
(e.g., a cable system headend, a broadcast distribution

facility, a satellite television distribution facility, or any other suitable type of television distribution facility). The remote media server may record programs and, if desired, program guide data. The remote media server may also record data associated with programs, such as data carried in a vertical blanking interval (VBI) or in a digital data track. The programs, program associated data, program guide data or any suitable combination thereof, may be recorded in response to requests generated by the interactive television program guide. Programs recorded by the remote media server may be distributed to users using any suitable video-on-demand or near-video-on-demand approach. Users may also have local media servers (e.g., personal computers) in their homes for recording programs and, if desired, program guide data.

'107 Patent at 2:63-3:12.

262. The server may also playback recorded programs in response to a user request:

Programs and program guide data may be recorded and played back on-demand by remote media server 24 in response to record and playback requests. Record and playback requests may be generated by a program guide server application or web application implemented on Internet service system 235. Record and playback requests may also be generated by an interactive program guide client implemented on personal computer 231 and may be provided to remote media server 24 by Internet service system 235. Programs and program guide data may be provided by Internet service system 235 to personal computer 231 using a suitable real-time Internet video approach (e.g., using the M-Bone), or may be downloaded and stored by personal computer 231 for playback.

'107 Patent at 8:37-50.

### **Historical Context of the '107 Patent**

263. Cable, satellite, and broadcast television providers offer viewers a large number of television channels. At the time of the '107 Patent, viewers needed to consult printed television program schedules to determine which programs were being broadcast at particular times. '107 Patent at 1:17-21. Also at the time of the '107 Patent, interactive electronic television program guides allowed users to more easily navigate television program information with the use of a remote control. '107

Patent at 1:21-25. These interactive television program guides typically organized the various television program listings in a list, grid, or table. '107 Patent at 1:25-28.

264. Some systems allowed for programs selected with a STB to be recorded and stored on a VCR. While the use of a VCR provided the benefits of basic recording, the functionality was very limited. '107 Patent at 1:40-58.

265. Other systems that used hard disk technology to store programs were available, but these systems suffered from the need for multiple additional hardware to provide functionality throughout a user's home, significantly increasing the cost of the user's home television equipment. '107 Patent at 1:59-2:3.

266. Video-on-demand (VOD) systems were also available, but these systems fell short in that they either required vast amounts of storage at the server to ensure that all possible videos desired by users will be available or were limited to only a subset of programs that the operator decided to record. '107 Patent at 2:12-19.

267. The inventors of the '107 Patent disclosed novel systems and methods for recording broadcast programs locally and on remote servers, and allowing subscribers to watch portions of a broadcast program stored on a remote server from a point prior to when the program was tuned to by the subscriber.

### **'107 Patent Allegations**

268. On information and belief after reasonable investigation, Comcast markets this infringing functionality as "Restart."<sup>47</sup> On information and belief after reasonable investigation, Comcast provides the X1 system, which allows subscribers to watch programs stored at a remote server from a point prior to when the program was tuned to using an IPG implemented on user television equipment (the '107 Accused Products). On information and belief after reasonable investigation,

<sup>47</sup> See, e.g., *Xfinity Community Forum*, XFINITY, <https://forums.xfinity.com/t5/TV-Archive/quot-Start-from-beginning-quot-feature/td-p/2970254> (last visited Oct. 2, 2018) (containing instructions from a Comcast employee for subscribers to make use of the "Restart" feature).

1 Comcast performs the methods claimed in the '107 Patent by allowing subscribers to  
2 watch programs stored at a remote server from a point prior to when the program was  
3 tuned to.

4 269. Comcast has infringed and is infringing, individually and/or jointly,  
5 either literally or under the doctrine of equivalents, one or more claims of the '107  
6 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making,  
7 using, offering for lease, leasing, distributing in the United States, and/or importing  
8 into the United States without authority or license, including without limitation, one  
9 or more of the Accused Products (hereafter the '107 Accused Products) that infringe  
10 at least claims 1-4 and 9-12 of the '107 Patent. On information and belief after  
11 reasonable investigation, each of the '107 Accused Products are designed to be and  
12 are used with each other and Comcast's servers to delete programs stored on remote  
13 servers.

14 270. Comcast has been, and currently is, an active inducer of infringement of  
15 at least claims 1-4 and 9-12 of the '107 Patent under 35 U.S.C. § 271(b). Upon  
16 information and belief, one or more of the '107 Accused Products of Comcast  
17 directly and/or indirectly infringe (by induced infringement) at least claims 1-4 and 9-  
18 12 of the '107 Patent, literally and/or under the doctrine of equivalents.

19 271. Comcast has had actual knowledge of the '107 Patent since at least  
20 September 23, 2014, when Rovi provided a claim chart to Comcast illustrating  
21 Comcast's infringement of the '107 Patent.

22 272. Rovi again provided Comcast notice of the '107 Patent by identifying the  
23 '107 Patent in a list of Rovi patents sent to Comcast in April 2015.

24 273. This Complaint will serve as notice to Comcast of the '107 Patent and its  
25 infringement should Comcast contend that it did not previously have knowledge  
26 thereof.

274. Comcast intentionally encourages and aids at least service providers and end-user subscribers to directly infringe the '107 Patent.

275. Comcast provides the '107 Accused Products and instructions to Xfinity subscribers so that such subscribers will use the '107 Accused Products in a directly infringing manner. Comcast provides instructions to its subscribers on how to use the functionality of the '107 Patent on its website.<sup>48</sup>

276. Comcast subscribers directly infringe by using the '107 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the '107 Accused Products and instructions to enable and facilitate infringement. Comcast provides instructions to its subscribers to use the "Restart" feature to watch a program from a point prior to when the program was tuned to using a remote server.<sup>49</sup> Upon information and belief after reasonable investigation, Comcast specifically intends that its actions will result in infringement of the '107 Patent or has taken deliberate actions to avoid learning of infringement.

277. Additional allegations regarding Comcast's knowledge of the '107 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

278. Comcast's infringement of the '107 Patent is willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

279. Comcast's infringement of the '107 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

<sup>48</sup> See, e.g., *Xfinity Community Forum*, XFINITY, <https://forums.xfinity.com/t5/TV-Archive/quot-Start-from-beginning-quot-feature/td-p/2970254> (last visited Oct. 2, 2018) (containing instructions from a Comcast employee for subscribers to make use of the "Restart" feature).

<sup>49</sup> See, e.g., *Xfinity Community Forum*, XFINITY, <https://forums.xfinity.com/t5/X1/Restart-Show-Command/td-p/2986131> (last visited Oct. 13, 2018) (describing a subscriber's email from Comcast regarding the "Restart This Program" feature).

280. Rovi has been damaged by Comcast's infringement of the '107 Patent and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

281. Rovi is entitled to recover from Comcast all damages that Rovi has sustained as a result of Comcast's infringement of the '107 Patent, including without limitation, lost profits and not less than a reasonable royalty.

### **EIGHTH CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 9,118,948**

282. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-281 of this Complaint.

283. The '948 Patent is valid and enforceable under United States Patent Laws.

284. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '948 Patent, including the right to collect for past damages.

285. A certified copy of the '948 Patent is attached as Exhibit H.

#### **The '948 Patent**

286. The '948 Patent describes, among other things, a method and system of recording multiple programs at a server in response to record requests from multiple user equipment. The patent discloses that a server receives a first record request for a first program and a second record request for a second program. The server, in response to receiving each record request, simultaneously records the second program and at least a portion of the first program.



1           287. As the '948 Patent describes, users may initiate record requests using an  
2 interactive program guide on user television equipment for programs that are  
3 received by a media server:

4           When a user indicates a desire to record a program or  
5 program grouping on remote media server 24 or local media  
6 server 29 (and possibly a desire to confirm recording of the  
7 program), the program guide generates a record request that  
8 is transmitted to the appropriate remote media server by  
9 communications device 51 (FIG. 9) via communications  
10 path 20 or 31. The record request may include, for example,  
11 an identifier for the program that the user wishes to record,  
12 an identifier for the user, and, if desired, any other  
13 information related to the program and the user.

14           '948 Patent at 22:10-19.

15           288. Record requests may be generated by an interactive program guide,  
16 including a program guide computer application:

17           Programs and program guide data may be recorded and  
18 played back on-demand by remote media server 24 in  
19 response to record and playback requests. Record and  
20 playback requests may be generated by a program guide  
21 server application or web application implemented on  
22 Internet service system 235. Record and playback requests  
23 may also be generated by an interactive program guide client  
24 implemented on personal computer 231 and may be  
25 provided to remote media server 24 by Internet service  
26 system 235.

27           '948 Patent at 8:47-55.

28           289. In response to these requests, a remote media server may record the  
requested programs:

          Remote media server 24 of FIGS. 2 a, 2 b, 2 c, 2 d, and 2 e  
records programs, program guide data, or any suitable  
combination thereof and supplies either or both to user  
television equipment 22 in response to requests generated by  
the program guide.

          '948 Patent at 8:61-65.

          290. The '948 Patent provides that a record request may be received in  
advance of the airing of a program such that the program is recorded by the media  
server when the program is aired:



1 Remote media server 24 may be based on any suitable  
2 combination of hardware and software suitable for recording  
3 and playing back programs or program guide data on  
4 demand. As defined herein, the phrase "recording on-  
5 demand" refers to recording a program or program guide  
6 data in response to a user's selection of a program for  
7 recording. The actual recording of a program need not take  
8 place at the same time that such a selection is made. For  
9 example, a program may be selected for recording before its  
10 scheduled broadcast time and may be recorded when the  
11 selected program is aired.

12 '948 Patent at 9:14-23.

13 291. In response to receiving record requests, a media server may record  
14 programs and provide user directories of recorded programs:

15 At the time a selected program or program in a grouping airs  
16 (which may be the time at which the program is selected for  
17 recording), remote media server 24 or local media server 29  
18 may record the program and any associated program guide  
19 data. Program guide data may be stored as files associated  
20 with the program using pointers. Once the selected program  
21 is recorded, remote media server 24 or local media server 29  
22 may provide a copy of user directory 59 to the program  
23 guide if the program guide maintains a copy of user  
24 directories. Alternatively, remote media server 24 or local  
25 media server 29 may provide a pointer to the location of the  
26 program on media store 63.

27 '948 Patent at 22:23-34.

28 292. The '948 Patent illustrates that multiple record requests can be handled  
by the media server such that multiple programs can simultaneously be recorded for  
multiple users:

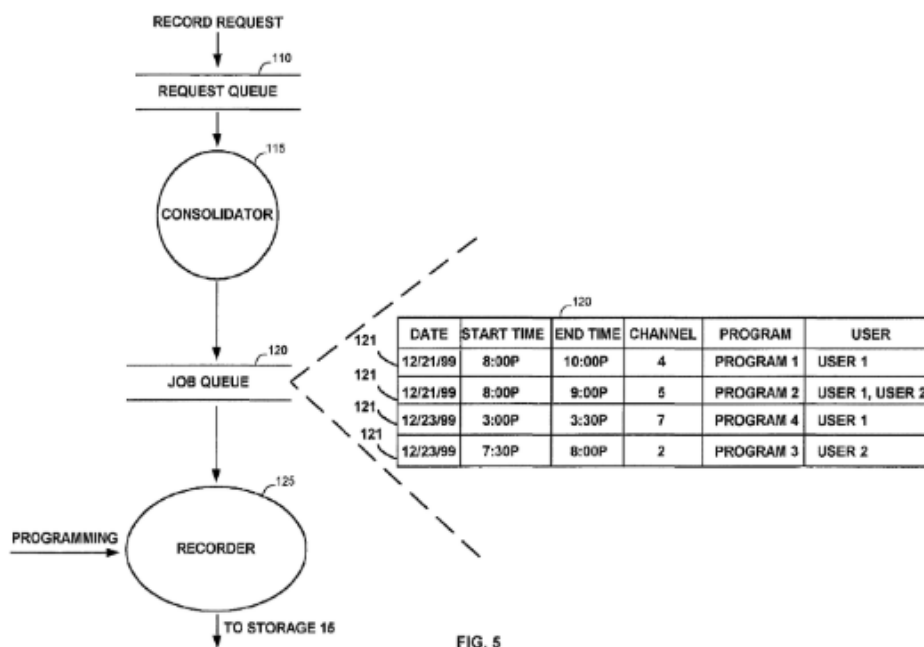


FIG. 5

'948 Patent at Fig. 5.

293. The media server can direct multiple tuners (such as any combination of analog tuners, digital tuners, and decoders) to record at particular times in order to record multiple programs for multiple users:

Recorder 125 may be a process running on processing circuitry 11 of remote media server 24 that is suitable for monitoring job queue 120 and recording programs on storage 15. Processing circuitry 11 of remote media server 24 may include, for example, one or more tuners, digital encoders, or digital decoders for tuning to or otherwise selecting programming provided by distribution equipment 21 and formatting the programs for recording by remote media server 24. Any suitable combination of analog and digital tuners and decoders are hereinafter referred to as tuners to simplify the discussion. Recorder 125 may direct the one or more tuners to particular channels (analog or digital) at particular times based on entries in job queue 120. In this example, recorder 125 may direct a first tuner to tune to channel 4 on Dec. 21, 1999 to record PROGRAM 1 for user 1. Recorder 125 may also direct a second tuner to tune to channel 5 at the same time to record PROGRAM 2 for user 1 and user 2. The upper limit on the number of tuners needed for remote media server 24 may be the number of channels distributed by distribution equipment 21. Such tuners may be based on tuning and decoding circuitry implemented using one or more integrated circuits.

1 '948 Patent at 11:26-47.

2 **Historical Context of the '948 Patent**

3 294. Over the years, cable, satellite, and broadcast television providers have  
4 offered an increasingly large number of television channels and television program  
5 listings, and interactive program guide technology has developed to allow television  
6 viewers to more quickly navigate to and select television programs, both currently  
7 airing and in the future. '948 Patent at 1:24-35.

8 295. Some systems allowed for programs selected with a STB to be recorded  
9 and stored with a connected videocassette recorder. While the use of a VCR provided  
10 the benefits of basic recording, the functionality was very limited in a number of  
11 ways. '948 Patent at 1:41-65.

12 296. Systems that used hard disk technology to store programs were available,  
13 but these systems suffered from the need for additional hardware to provide  
14 functionality throughout a user's home, significantly increasing the cost of the user's  
15 home television equipment. '948 Patent at 1:66-2:10.

16 297. Video-on-demand (VOD) systems were also available, but these systems  
17 fell short in that they either required vast amounts of storage at the server to ensure  
18 that all possible videos desired by users will be available, or these systems fell short  
19 in that users were limited to only a subset of programs that the operator decided to  
20 record. '948 Patent at 2:19-26.

21 298. The inventors of the '948 Patent disclosed novel systems and methods to  
22 enable a media server to record multiple programs simultaneously in response to  
23 different record requests from different user equipment associated with respective  
24 users. These novel systems and methods allow multiple subscribers to choose  
25 particular content to be recorded on a media server, which expands and tailors the  
26 content available to the subscribers on demand while also consolidating program  
27 storage.

**'948 Patent Allegations**

299. On information and belief after reasonable investigation, Comcast markets the infringing functionality as “X1 Cloud DVR”.<sup>50</sup> On information and belief and after reasonable investigation, Comcast provides the X1 system (the '948 Accused Products), which includes user equipment that allows users to schedule X1 Cloud DVR recordings and X1 Cloud DVR servers that record multiple programs simultaneously for multiple users in response to receiving record requests. Further, on information and belief and after reasonable investigation, Comcast performs the methods claimed in the '948 Patent by receiving record requests from different X1 user equipment associated with different users and simultaneously recording programs at a server.

300. Comcast has infringed and is infringing, individually and/or jointly, either literally or under the doctrine of equivalents, at least claims 1-3, 5-13, 15-21, 23, and 25-26 of the '948 Patent in violation of 35 U.S.C. §§ 271, *et seq.*, directly and/or indirectly, by making, using, offering for sale, selling, offering for lease, leasing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the '948 Accused Products and associated software (including at least the Xfinity branded IPG) that are used to infringe the '948 Patent. Upon information and belief after reasonable investigation, each of the '948 Accused Products are designed to be and are used with each other and Comcast's servers to receive multiple record requests from user equipment and simultaneously recording multiple programs with a server.

301. Comcast is an active inducer of infringement of one or more claims of the '948 Patent under 35 U.S.C. § 271(b). Upon information and belief, one or more

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<sup>50</sup> *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Dec. 7, 2018).

1 of the '948 Accused Products of Comcast directly and/or indirectly infringe (by  
 2 induced infringement) at least claims 1-3, 5-13, 15-21, 23, and 25-26 of the '948  
 3 Patent, literally and/or under the doctrine of equivalents.

4 302. This Complaint will serve as notice to Comcast of the '948 Patent and its  
 5 infringement should Comcast contend that it did not previously have knowledge  
 6 thereof.

7 303. Comcast intentionally encourages and aids at least service providers and  
 8 end-user subscribers to directly infringe the '948 Patent.

9 304. Comcast provides the '948 Accused Products and instructions to Xfinity  
 10 subscribers so that such subscribers will use the '948 Accused Products in a directly  
 11 infringing manner. Comcast markets the X1 System to subscribers by touting the X1  
 12 Cloud DVR with "60 hours of Cloud DVR storage available for each X1 DVR TV  
 13 Box on your account."<sup>51</sup> Comcast provides instructions to its subscribers on how to  
 14 use the functionality of the '948 Patent on these websites as well. Comcast further  
 15 instructs its subscribers how to watch Cloud DVR recordings.<sup>52</sup>

16 305. Comcast subscribers directly infringe by using the '948 Accused  
 17 Products in their intended manner. Comcast induces such infringement by providing  
 18 the '948 Accused Products and instructions to enable and facilitate infringement.  
 19 Upon information and belief, Comcast specifically intends that its actions will result  
 20 in infringement of the '948 Patent or has taken deliberate actions to avoid learning of  
 21 infringement.

22  
 23  
 24  
 25 <sup>51</sup> *X1 Cloud DVR FAQs*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-cloud-technology-general-faqs> (last visited Dec. 7, 2018); *see also X1 Cloud DVR Overview*, XFINITY, <https://www.xfinity.com/support/articles/x1-dvr-with-cloud-technology-available-features> (last visited Dec. 7, 2018).

26  
 27 <sup>52</sup> *Id.*

306. Additional allegations regarding Comcast's knowledge of the '948 Patent may have evidentiary support after a reasonable opportunity for discovery.

307. Comcast's infringement of the '948 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

308. Rovi has been damaged by Comcast's infringement of the '948 Patent and will continue to be damaged unless Comcast is enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

309. Rovi is entitled to recover from Comcast all damages that Rovi has sustained as a result of Comcast's infringement of the '948 Patent, including without limitation, lost profits and not less than a reasonable royalty.

## PRAYER FOR RELIEF

WHEREFORE, Rovi prays for a judgment in its favor and against Comcast and respectfully requests the following relief:

1. A judgment declaring that Comcast has infringed one or more claims of each of the Asserted Patents in this litigation pursuant to 35 U.S.C. §§ 271(a) and/or 271(b);

2. A preliminary injunction pursuant to 35 U.S.C. § 283 in accordance with the principles of equity preventing Comcast, its officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from continued leasing or offering for lease the X1 IPG Product to any cable operator or any Pay-TV provider that is not licensed by Rovi to make use, license, or sell any product offered by Comcast that practices,

1 provides, or contains any method, apparatus, or system covered by one or more of the  
2 Asserted Patents;

3 3. A preliminary injunction pursuant to 35 U.S.C. § 283 in accordance with  
4 the principles of equity preventing Comcast, its officers, directors, attorneys, agents,  
5 servants, employees, parties in privity with, and all persons in active concert or  
6 participation with any of the foregoing, from leasing, offering or providing to any of  
7 its cable customers and consumer end subscribers any IPG product solution that  
8 practices, provides, or contains any method, apparatus, or system covered by one or  
9 more of the Asserted Patents commencing on a date ninety (90) days following the  
10 entry of the preliminary injunction;

11 4. An injunction pursuant to 35 U.S.C. § 283 permanently enjoining  
12 Comcast, its officers, directors, attorneys, agents, servants, employees, parties in  
13 privity with, and all persons in active concert or participation with, any of the  
14 foregoing, from continued acts of infringement, contributing to infringement, or  
15 inducing infringement of the Asserted Patents in this litigation;

16 5. A judgment requiring Comcast to make an accounting of damages  
17 resulting from Comcast's infringement of the Asserted Patents in this litigation;

18 6. A judgment awarding Rovi its damages resulting from Comcast's  
19 infringement of the Asserted Patents in this litigation, and increasing such damages  
20 pursuant to 35 U.S.C. § 284 because of the willful and deliberate nature of Comcast's  
21 conduct;

22 7. A judgment requiring Comcast to pay Rovi costs, expenses, and pre-  
23 judgment and post-judgment interest for Comcast's infringement of each of the  
24 Asserted Patents in this litigation;

25 8. A judgment finding that this is an exceptional case and awarding Rovi's  
26 attorneys' fees pursuant to 35 U.S.C. § 285; and

27 9. Such other relief as the Court deems just and proper.  
28



MCKOOL SMITH, P.C.

1 DATED: March 6, 2019

Respectfully submitted,

2 MCKOOL SMITH, P.C.

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19 *Attorneys for Plaintiff*

**DEMAND FOR JURY TRIAL**

In accordance with Rule 38 of the Federal Rules of Civil Procedure and Local Rule CV-38-1, Plaintiff respectfully demands a jury trial of all issues triable to a jury.

DATED: March 6, 2019

Respectfully submitted,

MCKOOL SMITH, P.C.

BY /s/ Roderick G. Dorman

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